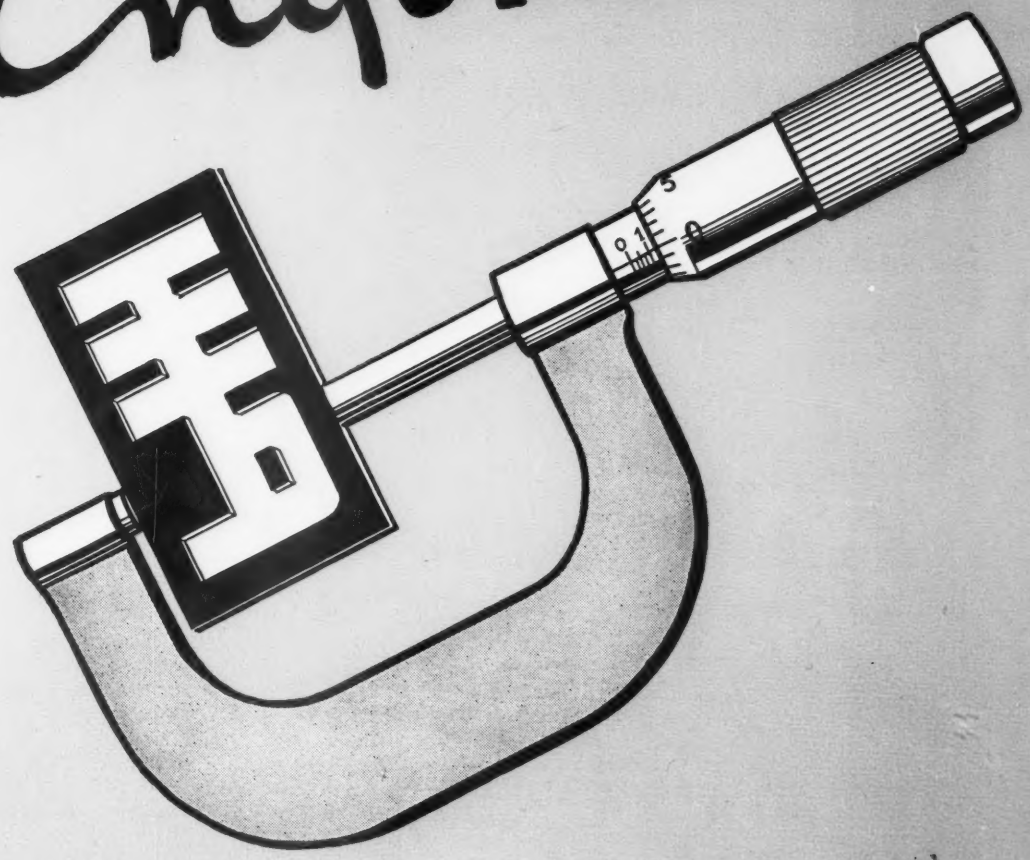
Printing Equipment Engineer



FEBRUARY, 1941

A TECHNICAL PUBLICATION FOR PRODUCTION AND MECHANICAL EXECUTIVES IN THE GRAPHIC ARTS INDUSTRY

★SUPER DISPLAY LINOTYPE MODEL 33 is eliminating costly hand operations in modern ad alleys. Magazines 35 per cent wider deliver display slugs with straight matter speed. And 5 point is set speedily. One-Turn Shift and Micro-Therm, plus the other Blue Streak features, make these Super Display Linotypes easily operated and maintained. The Super Display models are still more efficient with the Six-Mold Disk, Thermo-Blo, Duplex Display and Mohr Lino-Saw.

This ad was set entirely on a standard Two-in-One (72-90) Blue Streak Super Display Model 33.

Linotype Baskerville Bold and Caledonia Bold

PRINTING EQUIPMENT ENGINEER
1276 W. 3rd ST. • CLEVELAND, OHIO

THIS CARD IS IN THE 1941 CATALOG ISSUE
WILL YOU FILL IT OUT AND SEND IT TO US?

Dear Editor: Here are my answers —
1. Will this catalog be useful to you as a source of information for Printing Equipment and Supplies? Yes
2. Will you keep it handy for reading references throughout 1941? Yes
3. What is your opinion of the 1941 Catalog?
4. What suggestions do you have for the 1942 Catalog?
Name and Title John Doe, P.M.
Firm Name X.Y.Z. Printing Co.
Address 100 E. Smith St.
City and State Smithchester, Ill.

Dear Reader:

Advertisers judge the merit of a publication by its reader interest. You can help us show our advertisers that the 1941 Where-To-Buy Catalog recently received by you commands real reader interest. This is how you can do it.

If you have not already sent it to us, will you fill in and mail the Reader-Comment postage-paid card, top corner of the blue insert, just inside the front cover of the 1941 Where-To-Buy Catalog?

Frankly, we want to show our advertisers that by your willingness to fill in and return the card you are indicating to them that you read the advertisements and that the Catalog is importantly useful to you as a source of information about equipment and supplies. In turn, as the result of this proof of your interest, advertisers will make it possible for us to provide you with a more valuable technical publication.

Many already have returned the cards, but we wish to receive as many as possible to demonstrate that its readers universally do value the Catalog.

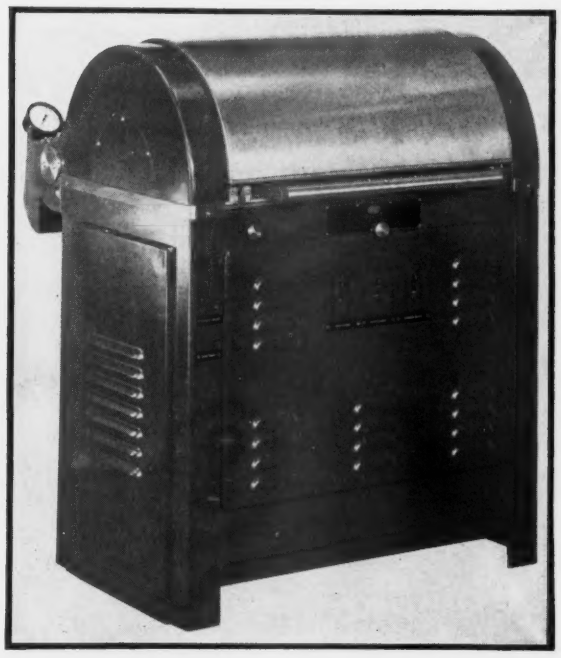
Cordially yours,
PRINTING EQUIPMENT
Engineer

Mac Sinclair

MS:MP

Mac Sinclair, Editor.

IF THE CASTING LEVELS OF YOUR DRY MATS LOOK THIS WAY, YOU NEED A STA-HI MASTER FORMER TO MAKE THE CASTING LEVELS LOOK LIKE



THIS, SO YOUR PRINTING PLATES WILL ALSO HAVE UNIFORM CASTING LEVELS TO INSURE QUALITY PRINTING

LOS ANGELES TIMES
ORDERS
2
STA-HI MASTER FORMERS

STA-HI CORPORATION
1020 CROCKER ST. • LOS ANGELES, CALIF.

The fluorescent lighting installation in the composing room of the Waterloo (Ia.) Daily Courier *has resulted in a saving of 4300 w. Combined saving in composing room, stereotype department and pressroom since installation of fluorescent lighting amounts to 8800 w. Fluorescent lamp troughs for illuminating the correction table have been hung on each lower edge of the inverted V overhead material canopy.*

Waterloo (Ia.) Daily Courier Installs Fluorescent Lighting

FLUORESCENT lighting fixtures recently installed by the Waterloo (Ia.) *Daily Courier* in composing room, stereotype room and pressroom give better light and effect a saving of 7800 w. The saving includes 4300 w. in the composing room, 2600 w. in the pressroom and 900 w. in the stereotype department.

The composing room, which had been using 6800 w. with incandescent lamps, has been cut to 2500 w.; the pressroom from 3500w. to 900 w., and the stereotype room from 1200 w. to 300 w.

Better light over makeup forms and ad banks has been obtained, and better light on the proof desk, resulting in a noticeable decrease in eyestrain and fatigue.

All lights over working surfaces are 6 ft. 2 in. from floor, and 35 in. from top of forms. The strip over the makeup turtles is 30 ft. long, and that over the correction bank is 10 ft. long.

Lights for general illumination are 7 ft. 2 in. from floor.

All units are on separate switches. The machinist's room has a 4 ft. unit over the work bench, and 2 ft. units over Monotype Giant Caster and Material Maker.

Blue daylight lamps are used throughout the composing room. Fifty-w. blue Mazda bulbs are used on the composing machines, and blend in with the fluorescent daylight.

The *Courier's* top executives are Gen. Mgr. Jackson McCoy, Mech. Supt. Earl Boller and Comp. Room Supt. Ed C. Funk.

LIKES AND DISLIKES IN COLOR

By HERBERT KAUFMAN*

*General Printing Ink Corporation, New York, N. Y.

MOST of us have curious likes for certain colors. We respond eagerly to some hues and reject others. Why this is remains something of a scientific mystery. However, here are a few enlightening notes that have come recently from the Color Research Laboratory of the Eagle Printing Ink Company.

Users of color in merchandise and printed advertising well recognize how hues may make or break a profitable result. To all indications we respond best to the two extreme regions of the spectrum, red and blue. Beyond this, however, the individual having a generally blond complexion is likely to favor blues and greens, while those of brunet complexion are likely to favor reds.

A European psychologist has attempted to explain this on a physiological basis. Blond types descend from ancestors who have dwelt in climates away from the equator where the bluish quality of reflected light from the sky is abundant. This causes a special pigmentation on the retinas of their eyes called "greensightedness," and may therefore account for their blue preference. On the other hand, people from more tropical climates have a pigment formation called "redsightedness," caused by an excess of heat rays from the sun. And again a physical condition in the eye may influence their liking for red.

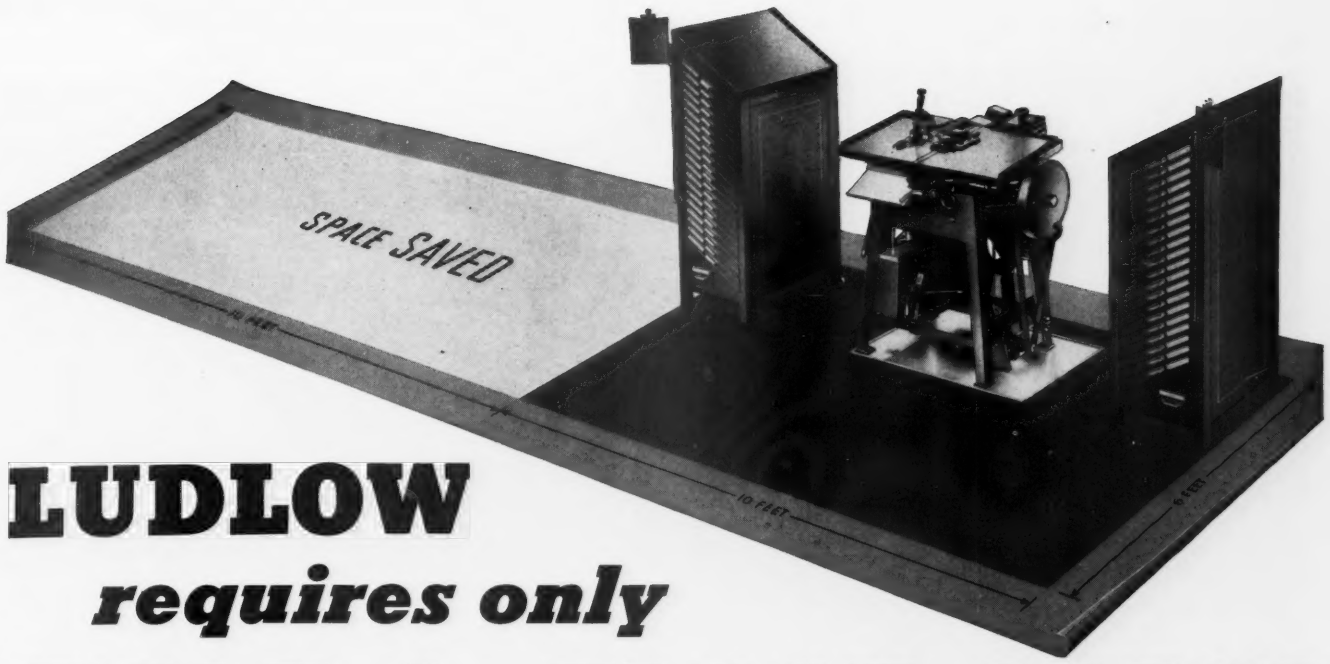
We know that Scandinavians buy greens and blues in products, while Latin peoples will be most drawn to the warmer colors. There should be profit in bearing these points in mind and giving thought to the racial types of buyers when colors are chosen to appeal to them.

"Wings for Words" Dramatized

Peter J. Koessler has dramatized *Wings For Words*, the original story which was written by Douglas C. McMurtrie with the collaboration of Don Farran. The purpose of the dramatization is to stimulate a wider interest in the historical background of printing. The booklet was distributed to schools of printing and printing organizations for use in connection with 1941 Printing Education Week which commenced January 13. The printing was done by the Timken Vocational School, Canton, Ohio. Chester A. Lyle, School Instructor, is also president of the National Graphic Arts Education Association and Chairman of the National Printing Education Week.

Living Lithography Booklet

The fifth Printing and Advertising Clinic of a series sponsored by General Printing Ink Corporation has been printed in booklet form. This particular clinic was devoted to lithography and was held at Hotel Barclay, Philadelphia last October. A number of experts participated. Copies of the proceedings which contain the all-around story of lithography, may be obtained by writing to Secretary to the Advisory Board Herbert Kaufman, PAC Clinics, General Printing Ink Corporation, 100 Sixth Ave., New York, N. Y.



LUDLOW
requires only
HALF the FLOOR SPACE
. . .says the Von Hoffmann Press

A typical example of the economy of floor space gained by installation of Ludlow equipment is brought out in a recent expression by the Von Hoffmann Press of St. Louis. Among other statements are these: "Before our machine was installed it was necessary for us to keep three machines casting sorts. . . It was necessary at all times to have as much as 50,000 pounds of cast-up type on hand in type cabinets and in sorts cans. . . The installation of our Ludlow has changed all this. . . The old system took up twice the floor space and was far from being nearly as efficient."

■ It requires no stretch of the imagination to understand this, since a 40-font Ludlow equipment, complete with cabinets and working space for the operator, requires only 6 x 10 feet of floor space. And with this compact unit an inexhaustible supply of new, clean type in slug form is always available—without type storage. Moreover, everything is within arm's reach of the operator—practically at his finger tips—and there is no waste motion—no time or energy lost through foot work.

■ Conditions in the modern daily newspaper plant demand the utmost production from each square foot of floor space. The executives of hundreds of newspaper composing rooms all over the world have saved precious floor space and, at the same time, stepped up efficiency of production by installing Ludlow equipment for their display composition.

■ Get the facts of the complete Ludlow story today. You will find well spent the time devoted to giving them thorough consideration.

Read these Excerpts from the Von Hoffmann Press Statement

"We can and do make up, not one page at a time, but as many as eight pages. . . This we were unable to do under the old system."

●

"Under the old system, last year's outside purchases of sorts cost in excess of $2,500 . . . expenses no longer necessary."

●

"A word about ease of make-up. Here you will find one of your largest savings. No longer is it necessary to justify each line . . . no longer is it necessary to worry about poorly spaced lines."

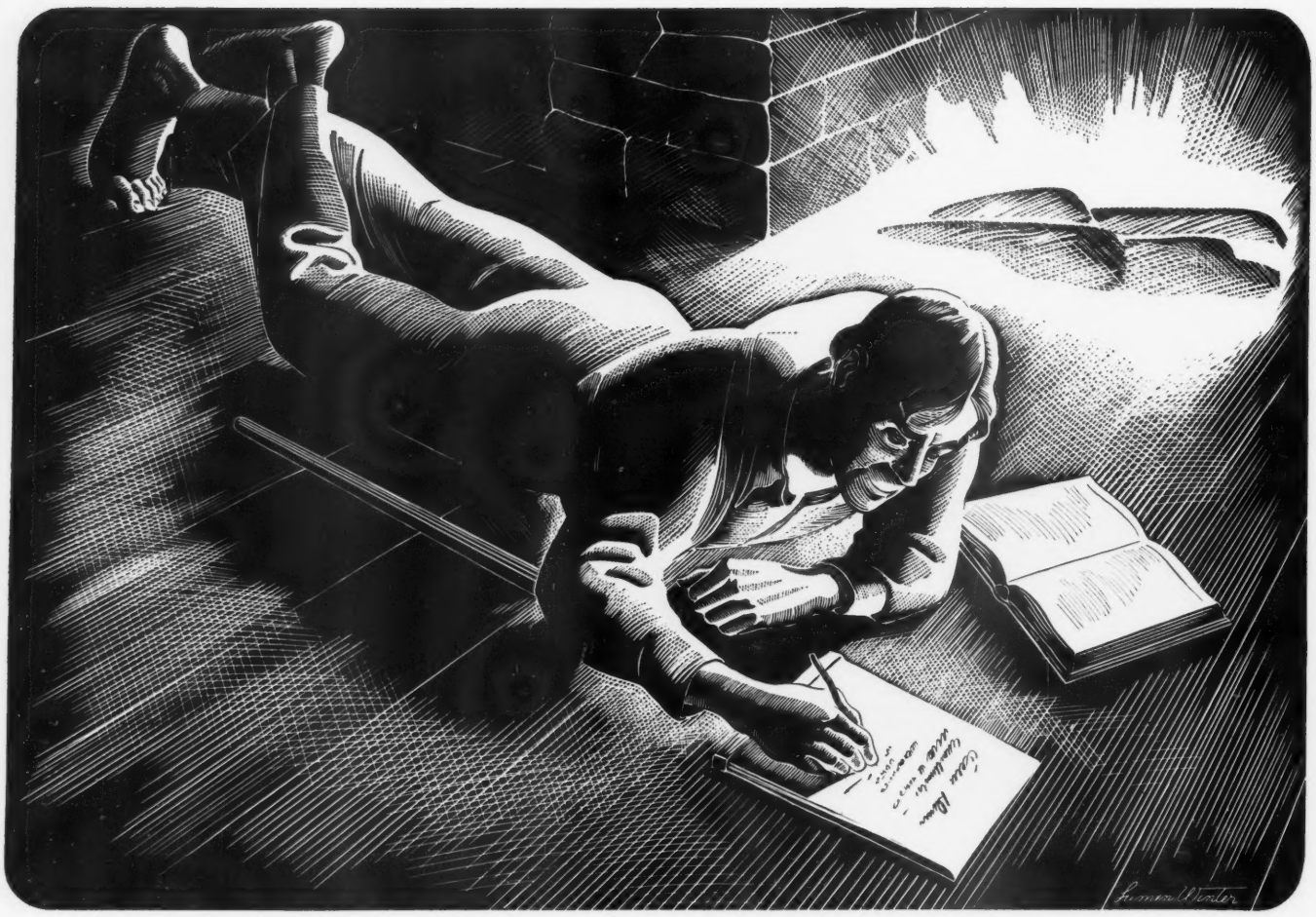
●

"The Ludlow has reduced the number of work-ups."

LUDLOW TYPOGRAPH COMPANY

Set in members of the Ludlow Karnak family

2032 Clybourn Avenue + + + + Chicago, Illinois



Shovel Scribblings and MARBLE INSCRIPTIONS

Miraculously Lincoln's scribblings came of age, and took their rightful place in halls of marble. Compelling advertising on Champion paper likewise inscribes that all important favorable impression upon the minds of buyers, as good printers give faithful reproduction of an advertiser's product and his message in every piece of literature. Whether the job you sell is one for coated or uncoated book, offset, cardboard, envelope, or postcard, Champion can supply a grade that will please and profit you and your customer.

THE CHAMPION PAPER AND FIBRE CO., Hamilton, Ohio

MILLS AT HAMILTON, OHIO . . . CANTON, N. C. . . . HOUSTON, TEXAS

Manufacturers of Advertisers' and Publishers' Coated and Uncoated Papers, Cardboards, Bonds, Envelope and Tablet Writing . . . Over 1,500,000 Pounds a Day

DISTRICT SALES OFFICES

NEW YORK · CHICAGO · PHILADELPHIA · CLEVELAND · BOSTON · ST. LOUIS · CINCINNATI · ATLANTA

TECHNICAL BOOKS

- **LITHOGRAPHER'S MANUAL — Compiled by Walter E. Soderstrom.** Second revised edition. Technical information from copy to finished job. Nationally known technical men contributed the bulk of practical camera, platemaking and presswork information. Size 8½ in. by 11¼ in. Bound in red cloth, gold stamped. Many of the 368 pages are illustrated. Price $5 per copy, cash with order.
- **PRINTING INKS** — Their Chemistry and Technology — **By Carleton Ellis.** Bound in cloth, 6 in. by 9½ in., 560 pages, well illustrated. For printing executives, pressmen, photo-engravers, platemakers, ink manufacturers, chemists, paper-makers. Author stays close to printing plant. The solving of new production problems brought about by technological improvements, both in equipment and inks, created the urgent need for this book. Price $7, cash with order.
- **MANUAL OF STEREOTYPING—By Joseph Goggin.** This 256-page book conveys latest technical information and manipulating procedure. Written by a practical stereotyper. Price $5.00, cash with order.
- **SIXTH PRODUCTION YEAR BOOK** — World of technical and production information in compact form covering art and photography, platemaking, engraving and electrotyping, bookmaking and binding, paper and ink, printing processes, production data and typography. The present (1940) edition consists of 612 pages, of which four out of five are illustrated. Size 8¾ in. by 11¼ in. Price $5 per copy cash with order.
- **PHOTOGRAVURE — By H. Mills Cartwright.** Covers all of photogravure's basic principles in concise and readable language. Rotogravure receives minor discussion but this is generally considered best textbook on photogravure process. Contains 202 pages, 34 illustrations, maroon cloth, size 6¼ in. by 9¼ in., $3.50 per copy, cash with order.
- **TIPS ON PRESSWORK — By G. C. Cooper.** This pocket size book measures 3½ in. by 5½ in. and contains 111 printed pages, heavy paper cover. Covers standard practices on cylinder and platen presses. Price $1.50, cash with order.
- **ETCH PROOFS — By J. H. Bartz.** Booklet, approx. 6 in. by 9 in. 40 pages and paper cover. Tells reasons for and how to take reproduction proofs. Price $2.00, cash with order.
- **HANDBOOK FOR PRESSMEN — By Fred W. Hoch.** Book written by authority on all phases of flat-bed letterpress production for the practical pressman. Contains 248 pages, 26 illustrations and 24 charts. $3 per copy, cash with order.
- **THE PRACTICE OF PRESSWORK — By Craig R. Spicher.** We offer copies to our readers at the special price of $4.00 per copy, cash with order. No printer should be without a copy (9000 copies printed).

• ***Send All Orders With Remittance to***

PRINTING EQUIPMENT Engineer

1276 W. Third Street
Cleveland, Ohio

TECHNICAL PUBLICATION FOR THE MECHANICAL EXECUTIVE RESPONSIBLE FOR PRINTING PRODUCTION, EQUIPMENT AND SUPPLIES IN THE COMMERCIAL, MAGAZINE, PRIVATE PLANT AND DAILY NEWSPAPER FIELD.

Printing Equipment Engineer

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Member Controlled CCA Circulation Audit

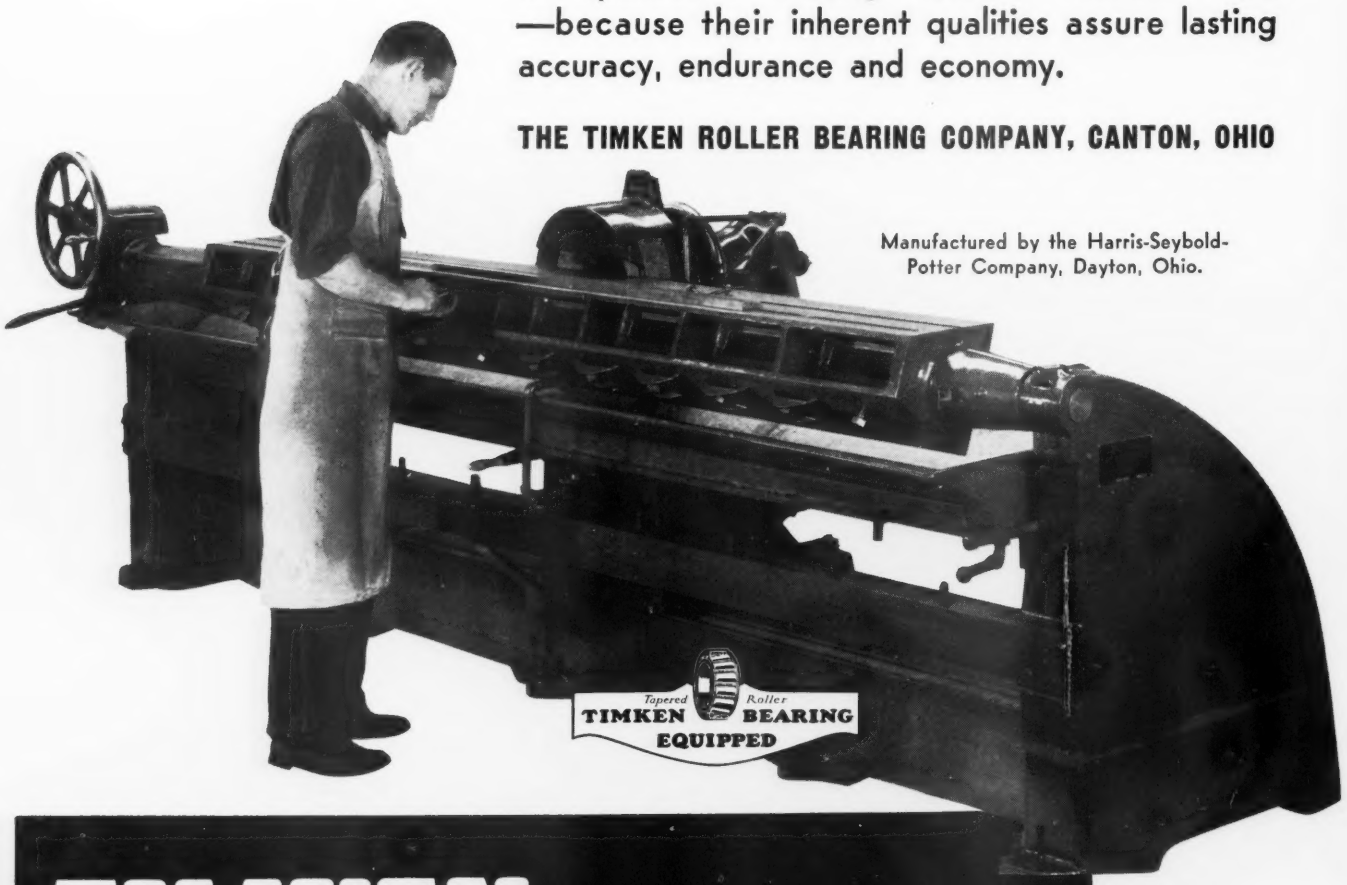
PRECISION EQUIPPED FOR PRECISION RESULTS

The grinding wheel shaft of the Seybold Type GCB Precision Knife Grinder is as important in its way as the spindle of a modern precision lathe. It must be maintained rigidly in dead-true alignment; it must be protected against all loads—radial, thrust or any combination of both. It must be free to spin at high speed without frictional resistance.

TIMKEN Tapered Roller Bearings are used on the wheel shaft of this knife grinder—as they are on the spindles of leading makes of machine tools —because their inherent qualities assure lasting accuracy, endurance and economy.

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

Manufactured by the Harris-Seybold-Potter Company, Dayton, Ohio.



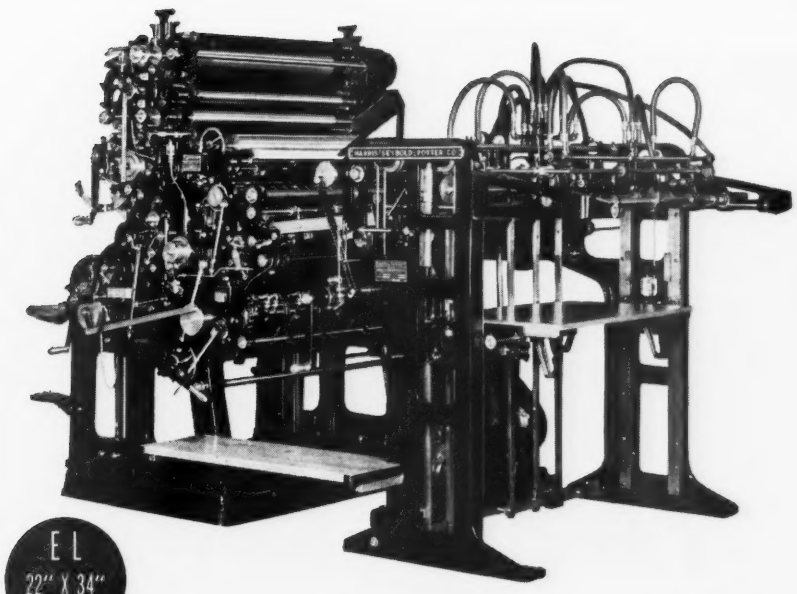
TIMKEN
TAPERED ROLLER BEARINGS

Manufacturers of TIMKEN Tapered Roller Bearings for automobiles, motor trucks, railroad cars and locomotives and all kinds of industrial machinery; TIMKEN Alloy Steels and Carbon and Alloy Seamless Tubing; and TIMKEN Rock Bits.

COMMAND MORE PROFITABLE JOBS

WITH THE CRAFTSMAN'S PRESS..

a Harris



EL
22" X 34"
Single Color

HARRIS LITHO CHEMICALS

Through research, Harris has developed and standardized new chemicals for both deep etch and surface plate making processes. Full details upon request. Write us with reference to your lithographic problems.

Production economies are not linked solely to the printing operations of a job. To an even greater degree, economical production is determined by whether each job is produced by the method to which it is best suited. • With the advantages of Harris Offset Presses added to your letterpress equipment, you command ALL jobs, including those that are by reason of their character, a challenge to production.

HARRIS OFFSET PRESSES

·HARRIS·SEYBOLD·POTTER·COMPANY·

PIONEER BUILDERS OF SUCCESSFUL OFFSET PRESSES

General Offices: 4510 East 71st St., Cleveland, Ohio • *Harris Sales Offices:* New York, 330 West 42nd St. • Chicago, 343 So. Dearborn St. • Dayton, 819 Washington St. • Atlanta, 120 Spring St., N.W. • San Francisco, 420 Market St. • Harris-Seybold-Potter (Canada) Ltd., Toronto, Montreal • *Factories:* Cleveland, Dayton

Our Laurels -are a Bed of Cactus

We can't rest on them. We have to keep continually on the jump in order to prepare rollers to meet your immediate requirements.

TOOL-UP FOR TOMORROW!

You have to hold your own in the competitive market of printing and lithography. The new things demanded of you in 1941 will tax your ingenuity and your plant equipment.

New inks, new presses, new processes—you'll need to know about the new roller materials, improvements in old materials, roller developments soon to be released—all designed to equip your plant properly for trouble-free and uniform presswork.

You will be looking over your rollers to see if they will meet your needs. If you are wondering whether you have the best roller equipment possible—check with Ideal!

Have you heard about the Ideal Durotype distributor roller? It's made of vulcanized oils. Four times as strong as the original Ideal distributing rollers. Accurately lathe-ground, it remains the same diameter throughout its life. Not affected by weather in any way. An all-year distributing roller that has a special affinity for inks. Why not give it a trial?

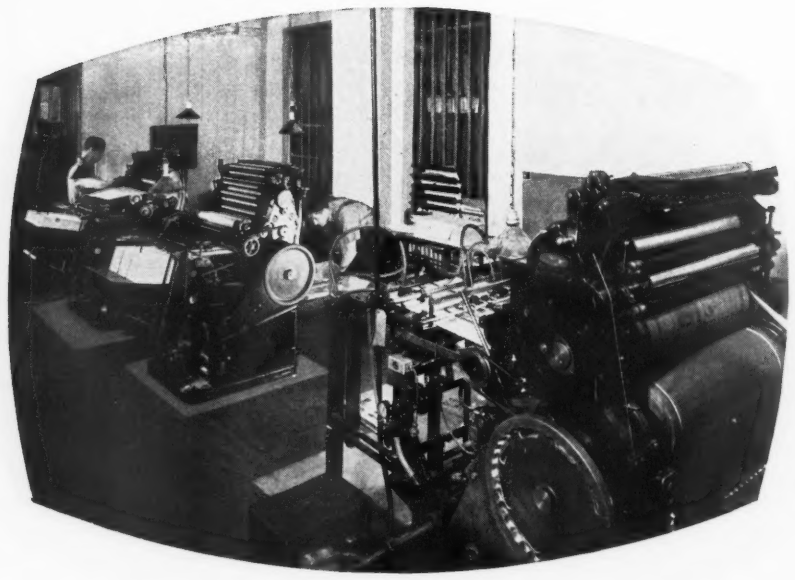
IDEAL ROLLER & MANUFACTURING CO.

CHICAGO, ILLINOIS *Branch sales offices located in principal cities* LONG ISLAND CITY, N. Y.

The Key to Better Printing

Howard Flint Ink Company

DETROIT CHICAGO INDIANAPOLIS DENVER NEW ORLEANS HOUSTON



Three ATF-Webendorfer Offset Presses building business in the modern "combination" plant of the *Rite Printing Service, Inc.*, New York City.

"*OFFSET* gives us the *flexibility* necessary for a profitable business"

. . . says another prosperous letterpress printer

"Only with the flexibility of *modern letterpress plus modern offset equipment* can a printer hope to serve his customers better, and on a more profitable basis today," says Mr. Leo Bennett, President of Rite Printing Service, Inc., well-known printers of quality offset and letterpress. Mr. Bennett speaks from experience, because he has just added a third ATF-Webendorfer Offset Press to his battery of modern Kellys. • Here is another instance of a letterpress printer who is taking advantage of offset's profit opportunities. Because of its simplicity and broad flexibility, offset has created an entirely new market for printing among letterpress buyers. The "combination" shop *gets* this extra business.

Why not take advantage of this opportunity to get more business and increase profits in your plant? Your nearest ATF branch office or dealer will be glad to give complete details, without obligation, of course. *Visit your nearest ATF branch TODAY!*

ATF

AMERICAN TYPE FOUNDERS

OFFSET DIVISION • 200 ELMORA AVENUE, ELIZABETH, NEW JERSEY

Types used: Garamonds, Stymie Blacks and Grayda

Why Experienced Pressmen Prefer

BRYANT PAPERS

You can't fool experienced pressmen by any amount of high-pressure talk on the quality of a printed sheet. With experienced pressmen it is the performance of the paper on the press that tells the story. Pressroom executives have many reasons why they prefer Bryant Papers, and one of the most outstanding is—

SUPERIOR SURFACE and COLOR

A pressman who knows his papers will tell you that Bryant Coated Papers have a fine surface with a glossy tenacious coating. To him this coating means that he can run fine halftones without cutting inks. Their affinity to printing ink permits fine halftones and heavy solids in the same form. Running the ink out of the can means infinitely better results; less offset, less smudge, cleaner, sharper impressions.

With that superior surface is a fine glossy white color that gives life and vigor to illustrations, particularly to halftones. The whiteness of the surface shows through the halftone screen, producing greater contrast between ink and paper. Often the halftone results on Bryant Papers are as pleasing as the engraver's proof.

As to uncoated paper, the beautiful texture, smooth, easily printed surfaces and clean, clear whiteness make Bryant uncoated papers the "pressman's pet" in any printing plant.

The next time a job comes up calling for the most in quality, advise the "front office" to order Bryant Papers. You will be greatly pleased with the results.

BRYANT COATED PAPERS

- Bry-Fold
- Imperial
- Cellugloss
- Pliable
- Milham Enamel
- Milham Offset Enamel
- Sunray
- Sunray CLS Litho
- Brycoat

BRYANT UNCOATED PAPERS

- De Soto English Finish
- De Soto Super
- British Opaque
- Bryantique
- Milham English Finish
- Milham Super
- Sunbeam English Finish
- Sunbeam Super
- Bryanteer English Finish

FINE PAPERS FOR FINE PRINTING

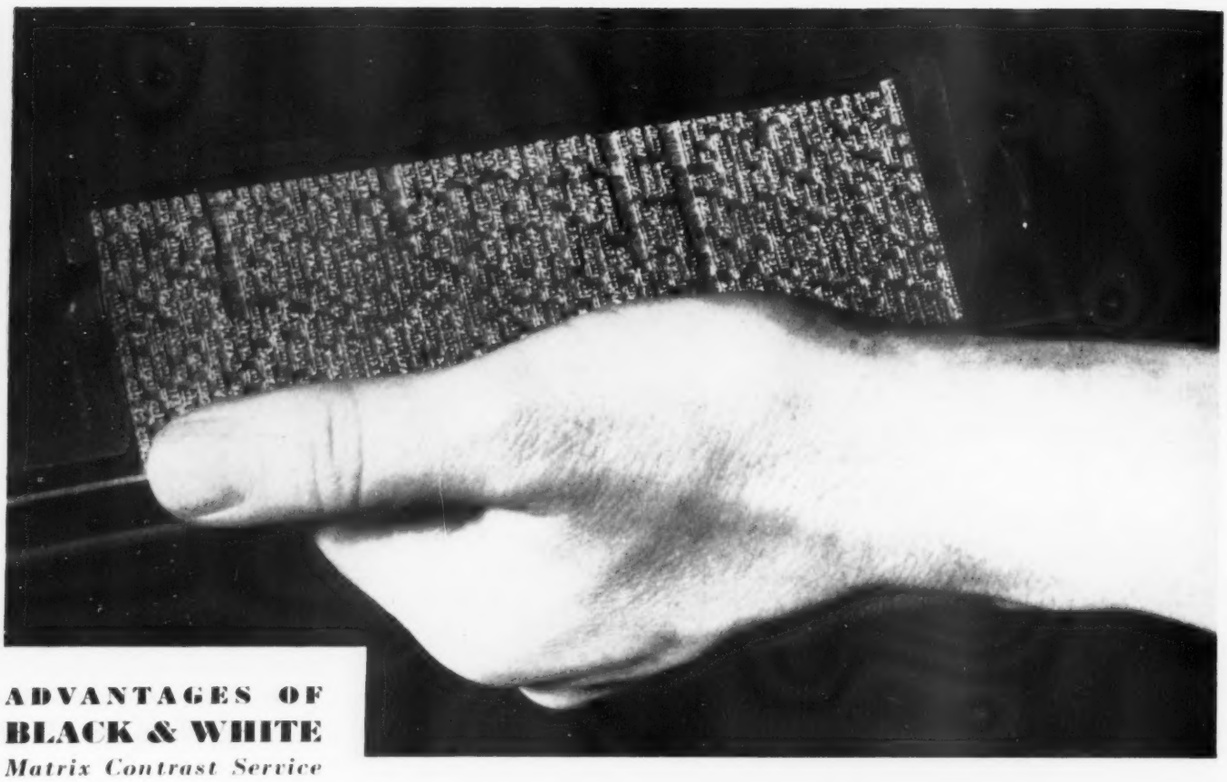
BRYANT PAPER COMPANY

Paper for Letterpress, Lithography and Rotogravure

KALAMAZOO, MICHIGAN

Sales Offices

CHICAGO—CINCINNATI—NEW YORK



ADVANTAGES OF BLACK & WHITE
Matrix Contrast Service

IT ELIMINATES ONE-THIRD of all errors in regular "straight" composition* . . . and an even larger proportion of errors in ad composition.

IT REDUCES the non-productive time spent on setting corrections, handling and inserting correction lines, pulling proofs, re-handling revised proofs, etc.

IT SPEEDS UP production during busy peak-load periods.

IT INCREASES, substantially, the number of takes that go through OK, with no corrections, in straight news and particularly in display ad composition.

IT ELIMINATES most of the glaring errors in railroaded news composition.

IT GREATLY REDUCES the non-productive machine changes that are made necessary by errors in ad composition.

IT PREVENTS EYESTRAIN, conserves energy, and promotes increased composing room production.

IT SAVES CLEANING MATS.

IT CAN BE INSTALLED on a pay-as-you-profit basis.

*ONE-THIRD reduction of errors is the usual average. A reduction of at least 25% is guaranteed.

One-third

of that type is PURE WASTE!

Our picture shows a big batch of corrections. It took some time to set those lines . . . and it will take a lot more time to insert them where they belong, re-prove the galleys or pages, re-read them, etc.

***One-third* of all that work can be prevented . . . by means of BLACK & WHITE Contrast Service. May we send you PROOF and our latest booklet?**

MATRIX CONTRAST CORPORATION

Sole Licensees of the Percy L. Hill Matrix Contrast Patents Nos. 1,466,437 and 1,796,023

EMPIRE STATE BUILDING, NEW YORK

European Agents: Funditor, Ltd., 3, Woodbridge Street, Clerkenwell Green, London, E. C. 1

Black & White
MATRIX CONTRAST SERVICE

COORDINATION *in commercial printing plant operation secured by quintuple copy order blank . . . . Profit-eating motions eliminated.*

By ED SAMUEL *

*Plant Superintendent, A. S. Gilman, Inc., Cleveland, Ohio

MOST of the discussion about the Order Blank used in our printing plant will be confined to the production side inasmuch as the majority readers of *Printing Equipment Engineer* are production executives. The Order Blank discussed in this article has been experimented with over a several-year period. Like most anything else, this plan of executing an order for a job of printing required considerable study over a period of time. We feel now, however, that most of the "bugs" have been eliminated. It is just possible that further refinement of the system will be necessary as use demonstrates the necessity.

The use of this system in our plant is the outcome of complete cooperation by the front office with the production man's problem. It is the result of overcoming problems incidental to any printing job with which both the front office and production departments previously experienced trouble, not to say anything about the loss of time spent in telephone conversations by customer, manager, sales manager, sales representatives, superintendent and departmental foremen, caused by lack of specific data on the previous type of order sheet used by us. Its development has been fostered by Manager Harold Thompson.

Benefits Secured

Perhaps it would be best to enumerate first the production benefits and some of the problems eliminated in both the front office and production department resulting from the use of this particular blank. These are as follows:

(1) All of the essential details necessary to the production of a job are included in this blank.
(2) Unnecessary conferences between salesmen, superintendent or departmental foremen are eliminated. The idea is to eliminate taking one another's time, especially where a party to be consulted is not available at the moment.
(3) Direct responsibility for specifications are centralized upon the salesman who in the case of our company is the direct contact between the printing plant and the customer.
(4) Method of filling out the order for any job facilitates simultaneous activity in getting started on production by all departments concerned.
(5) Eliminates "errand boy" duties by superintendent or departmental foremen.
(6) Verbal instructions are eliminated.
(7) Miscellaneous hand or typewritten notes relative to production are eliminated.
(8) Responsibility is pinned down each step of the way.
(9) Sales department costs are segregated from production costs and *vice versa*.

Why Lead Pencil?

Without going too much into detail, especially with respect to preliminary conferences by and between sales representative, estimator, sales manager, and so on, we'll simply state that when a job of work has been accepted by the customer at an agreeable price, the sales representative fills out the order blank *with lead pencil*, using two-face carbons between the sheets. Manager Harold Thompson has insisted upon this because to his manner of thinking, a printing plant primarily is a service house. Each manufacturing operation is personal to the job being done for the customer. No printing job is exactly similar to another and must be handled accordingly. Also, these reasons may be listed: (1) Being hand written, the sales representative is careful to put down the correct details because he is held responsible for the instructions contained in the blank. (2) If the sales representative were to wait until evening to dictate instructions to a stenographer, there would be a delay of one or two days before the typed order could be gotten into plant circulation; (3) If the sales representative were to use a dictating machine for names and figure specifications, there is liability of misunderstanding as to just what the sales representative means to convey, because of sound-transmitting limitations.

The sales representative's copy is at the bottom of the five copies. He will be reasonably sure that his own and the production department's copies will be legible when it is necessary to refer to the customer's order while in process of manufacture.

Do You Function One Hundred Per Cent?

A PRINTING plant production executive is not functioning AS AN EXECUTIVE when he spends some of his time doing unnecessary chores to make up for incompletely filled-in Work Order or Planning Sheets. It would seem preferable to control the elements entering into a printing job by furnishing completely the necessary information so that the departmental foreman will not find it necessary to waste his own as well as the time of others on small details when that information can be supplied by the one best able to supply it before the order is transmitted to the production department.

It is infinitely better for a commercial printing plant executive to spend ALL his time on departmental management and supervisory work than to spend some of it on inconsequential details—Let us illustrate: A job comes in and is routed through the plant; the composing room foreman discovers one or more cuts are missing. He phones the customer direct, or if he is beholden to him, he tells the plant superintendent. Result in either case is that some pretty high-priced errand-boy work is being done.

Another instance where lost motion may occur is in the sending of incomplete orders through the production departments. Let's illustrate this, too. The composing room foreman is about to send proofs to a customer. Because there are no instructions on his job order blank directing him to send the proofs to a specified person, he sends them to the customer marked only by the company name. Proofs are delivered to the company all right, but only get as far as the customer's phone girl. Meanwhile, the customer's executive to whom the proofs should have been sent, calls the printing company's sales representative about failure of proof delivery. Sales representative gets in touch with plant superintendent, who in turn contacts composing room superintendent. More phoning back to customer's executive plus lost motion in customer's organization. Complete instructions on original order would have avoided this sort of thing.

Perhaps an occasional slip of one kind or another is unavoidable, but it is clear that complete production control is part of the answer to lower operating costs and normal plant profits.

Now, after the blank has been filled out and the road is clear to go ahead with the job, the sales representative delivers the five copies to the estimator. The estimator gives the job a number and then the Order Blanks are distributed to the departments as indicated on each sheet. The salesman receives his copy for his own use; one copy goes to the Accounting Department Head, and one to the Layout Department. The Shipping and Production Department copies are given to the Plant Superintendent, he retains the production copy, the shipping copy is sent to the Shipping Department at the proper time.

Must be Filled Out Completely

It should be stated here that if all the information is not indicated on the blank, the estimator immediately returns it to the sales representative who supplies the missing data. When the superintendent receives the two copies, he, too, is careful to see that all essential information is supplied. If any items are missing, he returns the blanks to the estimator. In other words, the superintendent may not accept the blanks until he is certain everything is OK, for the reason he is held responsible for the job once he has accepted it.

In this connection, I don't think Mr. Thompson will mind it when I state that while he is the one who has cooperated to the fullest in getting the system established, he was at first one of the worst offenders in not supplying necessary data. In fact, he likes to tell it on himself. He handles accounts in a sales capacity for certain customers.

Wheels Automatically Set in Motion

After the departments indicated receive their copies, the wheels are automatically set in motion simultaneously. If the customer is new to the firm, the Accounting Department starts checking the financial reliability of the customer. If his investigation indicates there is any doubt about it, he at once calls the Estimator who in turn notifies the Layout and Production Departments to return their blanks. As soon as the customer's credit has been found satisfactory, the blanks are released.

Barring a pause by the Accounting Department, the Layout and Production Departments also proceed with their work.

Like everything else, there are occasional exceptions to any rule. If the plant superintendent finds it is impossible to finish and deliver a job by the date specified on the blank, say in three days, the superintendent gets in touch with the manager. At once the customer is contacted to secure the extension of production time.

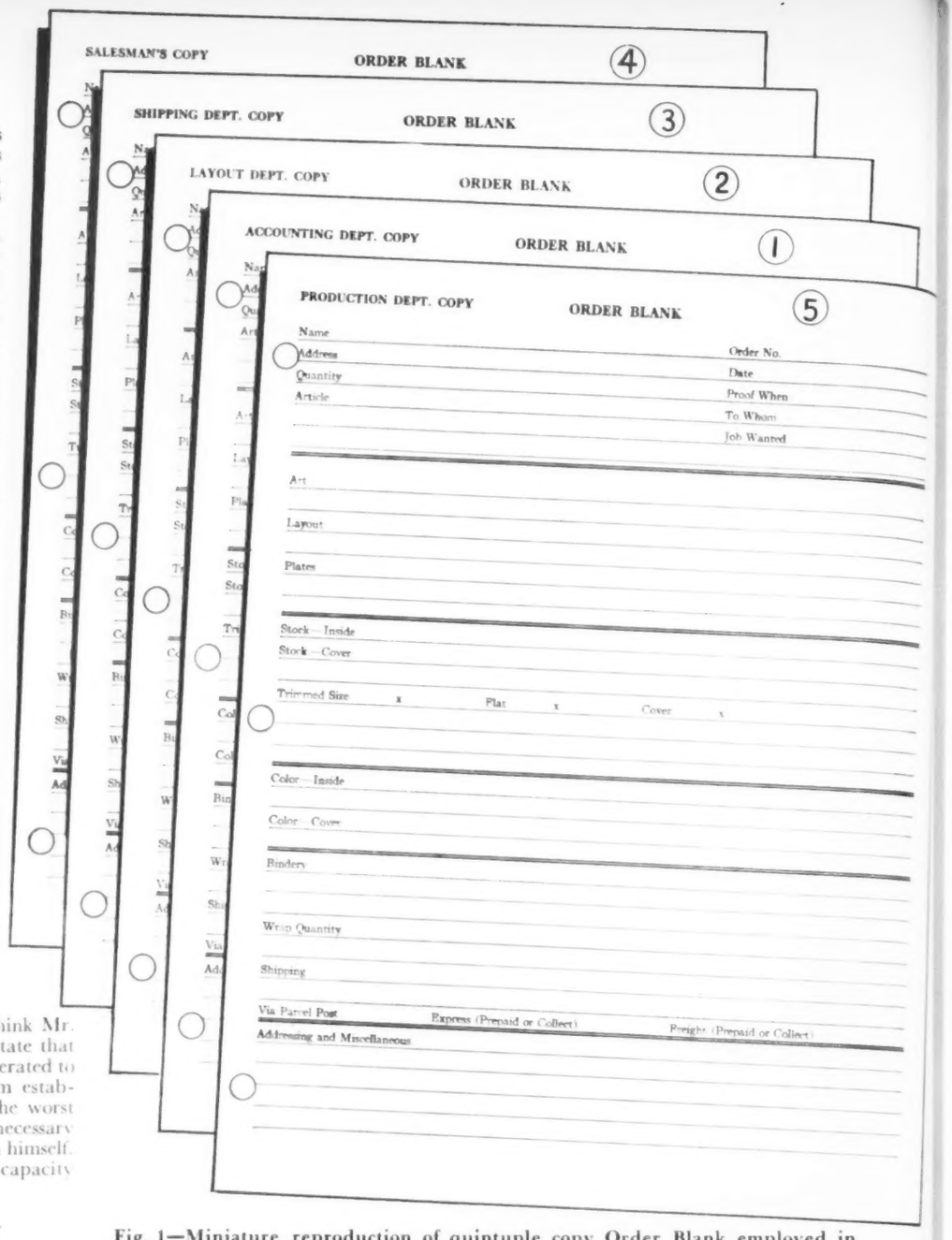


Fig. 1—Miniature reproduction of quintuple copy Order Blank employed in the A. S. Gilman, Inc., printing plant, Cleveland. As numbered above by the artist for identification, the first or pink copy of manifold stock is for the Accounting Department; copies Nos. 2, 3 and 4 are white manifold for Layout, Shipping and Salesman; the fifth copy (16 lb. bond) is for the Production Department. When the salesman fills out the blank he places two-faced carbon between the sheets. The sheets are 8½ in. by 11 in. size, and are punched for loose-leaf binder. For reverse side of Production Department's copy, see Fig. 2.

Customer Changes

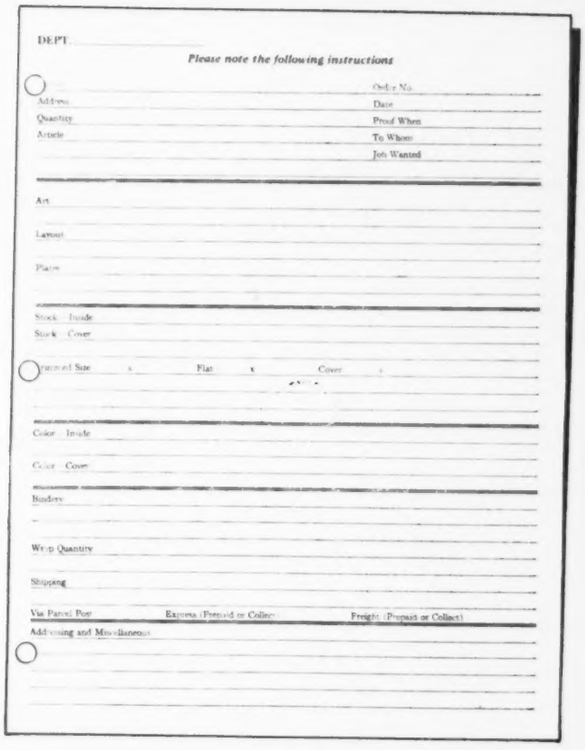
Another exception taking place occasionally after a job has been routed into the plant may occur when a customer changes his mind about some detail in the work being done for him. In case a customer calls the sales representative with whom he has been dealing, and it is necessary to change any of the original specifications, the sales representative makes out what might be called an Alteration Blank, miniature of which is shown in Fig. 3. This blank is in duplicate — goldenrod for production notification of the change to be made, and cherry — color copy to be placed with the copy of the original Order Blank in the sales representative's own book. The original is given to the department affected by the change.

The changes in specifications are thus noted by the department responsible for that part of the work. Should the alterations affect the cost of the job such as another weight of paper, texture or color, engravings, etc., the estimator notifies the salesman and the accounting department of the amount. This helps to simplify the accounting department's billing in view that he has written information of whatever changes are made.

PLANNING SHEET

OPERATION	PLAN HRS.	Machine No.	STARTING DATE	STARTED	FINISHING DATE	EST'D HRS.	REMARKS
K. B.							
CAST							
LINO							
COMP.							
G. C.							
M. U.							
COLOR M. U.							
COR.							
A. A.							
P. L.							
P. L.							
REG.							
P. L.							
REG.							
CUT							
M. R.							
RUN							
M. R.							
RUN							
M. R.							
RUN							

Fig. 2—Reverse side of Production Department's copy of Order Blank shown in Fig. 1. In the Plant Superintendent's office, the estimated time required for the various mechanical operations involved in producing a job is placed in the column headed Est'd Hrs. The actual time consumed is marked down under the column headed Plan Hrs. Other data such as machines used in production, Starting Time, Starting Date, when work was Started, Finishing Date and Remarks are entered under the respective columns. In conjunction with a departmental Daily Schedule Sheet kept by the foremen of the various mechanical departments, the actual progress of a job through the plant may be checked daily by the superintendent whose copy of the Order Blank becomes a complete production record.



DEPT.

Please note the following instructions

Address
Quantity
Article
Order No.
Date
Proof When
To Whom
Job Wanted

Art
Layout
Plates
Stock—Inside
Stock—Cover
Trimmed Size x Flat x Cover x
Color—Inside
Color—Cover
Binders
Wrap Quantity
Shipping
Via Parcel Post Express (Prepaid or Collect) Freight (Prepaid or Collect)
Addressing and Miscellaneous

Fig. 3—The size of this Alteration Sheet corresponds with the Order Blank shown in Fig. 1. It's 8½ in. by 11 in. size. The blank is used for marking down customer alterations or additional operations for a job after it has been gotten into production. In all cases, this blank carries the same order number as the original Order Blank which it supplements. This Alteration Sheet is made out in duplicate — original is goldenrod and the duplicate is cherry colored 16 lb. bond. The department affected receives the goldenrod copy. The cherry colored copy is retained by the sales representative. Alteration costs are supplied by the Estimator, while the sales representative supplies the selling prices, and in turn passes his copy of the alteration blank to the Accounting Department so the extra charges may be included in customer's statement.

Any change in instructions, in the mechanical departments are transmitted to the department by the Plant Superintendent.

To correspond with as many customer changes a may be made from time to time during production of a job, an Alteration Blank is filled out by the sales representative securing the account. On some work there may be several customer changes, which means just that many copies of Alteration Blanks to be filed with the Sales Representative and the departments for which the information is intended.

Plan Sheet

An important part of the Production Department's copy of the Order Blank is printed on the reverse side. This form is not printed on any of the four other copies. This form is shown in Fig. 2. On this side are set down in the column headed *Estimated Hours* — the Estimator's figures for the separate mechanical operations involved in the production of a job. The information is comprehensive from type or line-slug composition, presswork and other hand or mechanical operations.

From day to day (in the case of a catalog or other large work) the Plant Superintendent transfers from the departmental foreman's Daily Schedule Sheet (which is described in another article) the completed actual time required for the various operations. Under the column *Plan Hours* are marked down the actual number of hours in 6 minute units taken for each operation.

When the job has been finished, the original Order Blank is filed alphabetically by company name for future reference in the superintendent's filing cabinet kept for the purpose.

Elected Director

At a meeting of the Board of Directors of Intertype Corporation, held on January 14, 1941, Dr. Harry S. Rogers was elected a director of the Corporation to fill the vacancy on the Board created by the death of J. William Buzzell. Dr. Rogers is nationally known as an engineer and educator.

Expands Supplies Line

American Wood Type Mfg. Co. announces that the firm is now manufacturing a complete line of Hemple style non-slip quoins in three sizes, a complete line of quoin keys including pressmen's combination and triple combination keys, type high gauges and benzine cans.

How To Maintain D. C. Motors

Bulletin No. GEA-3488, entitled *How To Maintain D.C. Motors*, has been published by General Electric Co. Gives causes and remedies for mechanical and electrical d.c. motor troubles. Please ask for Bulletin No. GEA-3488. The bulletin may be secured through *Printing Equipment Engineer*.

"Service" . . . (*A Newspaper Production Problem*)

NEWSPAPER manufacturing costs have been on the upcurve for a considerable time now. Among these are increased labor costs due to rising hourly rates and the shortened work week; ever-increasing taxes; reconstruction costs in display composition; increasing costs due to obsolescent equipment; the killout and overset type problem and other costs more or less important. There isn't much management can do about some of them, but in particular it can set about remedying the expensive luxury of reconstruction costs.

Really, What is the Answer?

THIS editorial is about a problem that is near the heart of all newspaper production executives. Every one of them would be happy to see the "service" problem eliminated.

Because those who have given this problem a great deal of thought might have one or more sound solutions, the editor will be greatly pleased to hear from our newspaper production executive readers. In order to have both sides, we'd like to hear from managing executives, too.

Really, what is the answer? Increased advertising rates? Unit charges for store alterations? Collective action — or what?

Through their advertising departments, newspaper executives in many instances have leaned so far backward to give "service" to customers that many have bumped their heads on the floor and have suffered unconsciousness to the extent that it has been impossible to revive them. This is just another way of saying that "service" has been a contributing factor in the demise of a considerable number of newspapers within the past few years. Many surviving newspapers, likewise, are yet bearing excessive production costs in the name of service to the advertiser. This service item is a thing which like Topsy, has "just growed."

Before depression, when cost of manufacture was considerably less and advertising pages were secured freely, newspaper executives thought only of more business and how to get it. As a result, not much attention was paid to production costs. As time passed, business did not improve and in most instances continued to decline, yet production costs continued to increase. In the early 30s — and since then — a few publishers became interested and later on other publishers began to take notice of rising production costs. Some investigation was made. Generally speaking, the entire study was devoted to operating methods, personnel and equipment in the mechanical departments. It was right that each of these should be investigated and economies instituted wherever possible.

There was one contributing factor in increased production costs, however, to which newspaper executives did not pay much attention, and it is still on the increase. This factor is the "reconstruction service" demanded by the advertiser because the newspaper executive, for some reason or other, has not come to know that he does not have to give an extra pair of pants with the suit or throw in a cravat with the shirt. His advertisers quit doing that a long time ago, but he, the newspaper executive is still doing it. Comparatively speaking, the newspaper executive gives the customer two or more suits for the price of one in many instances. That is not good business and the advertiser has no right to expect something for nothing. In view of the present state of the industry, this reconstruction service is going to be a contributing factor to the passing of more newspapers unless something is done to eliminate it.

The "extra pairs of pants" given by newspapers to advertisers frequently is further increased by the advertising department. The results secured by the sales force are measured by the number of inches or columns sold. The department is not interested in costs because it does not have to answer for increased or unreasonable costs in the production of advertising. Many salesmen make suggested changes in advertising proofs that are extremely costly and are without value in the effectiveness of the advertisement. Is there any other business that would permit this?

This "service" condition prevails for several reasons. In some instances, the competitive situation is the excuse. It seems that men who are supposed to be smart enough to operate newspapers ought to be big enough and far-sighted enough to get together and eliminate that competitive situation by subscribing to remedial agreements and afterwards stand by those agreements. Newspaper customers did that very thing a long time ago. Store managements have certain closing hour agreements, merchandising agreements, sale agreements and it would not be surprising if we should find out some time that they might have certain agreements respecting their dealings with newspapers.

Unlike the merchants, it seems newspaper managements haven't been able to get together. We are not advocating that agreements should be made which would be unjust to the advertiser. We believe, however, that newspaper managements should be able to get together on certain stipulations which will prevent the advertiser from unjustly imposing upon the newspaper.

One of the principal thorns in the flesh of the production executive is reconstruction costs. A well-known composing room authority declared at the Chicago 1940 ANPA Mechanical Conference that 60% of total composing room production time is invisible but that at least 10% of this time can be charged to display advertising reconstruction work. Reconstruction time on display advertising has been known to amount to two or three times the amount of time required for original composition of the advertisement. As many as 7 or 8 revised proofs have been furnished in some instances. In fact, it would seem that the advertiser's frame of mind is such that slap-dash copy is all right and he can make all the alterations he pleases in his store proofs instead of preparing accurate original copy. His attitude might be summed up thus: "Hell, I won't be careful with the copy — it's cheaper to correct."

An expensive psychological factor enters into the revision work on store proofs in the ad alley. For instance, the foreman sees one of the ad men apparently stalling his work on a store correction proof in the ad alley. Noting that edition time is perilously near, he asks the ad man: "Why don't you pitch in and get that ad finished?" The ad man's reply is: "Yeah? This is the fourth time I've reset this ad." We don't believe you'll dispute the fact that anyone would rather work constructively on properly planned work. The ad man believes it, the supervising executive knows it, and management should recognize the fact.

No one ever hears about commercial printers giving away a part of the productive costs which were not included in the original estimate. The commercial section of the printing industry allows a certain minimum number of units gratis — the rest are charged for at so much per hour.

The remedy for the elimination of these uneconomic costs is obvious to everybody connected with newspaper production. The problem is how to make the remedy effective. Store alterations, or author's corrections, are now being charged for here and there over the country by a few newspapers who

have had nerve enough to go through with the idea. A certain number of units are allowed the advertiser — the rest are paid for at an hourly rate.

Emphatically, the production executive is not the deciding element in the elimination of this evil. He can, however, keep records of these costs for presentation to the business executive when "called upon the carpet." If the production executive does not keep figures on production costs, his replies about certain moot production costs can be considered expressions of opinion — not of fact. As an aside, we'd like to remark that it's rather inconsistent of the business executive to ask about costs when he is responsible for a substantial portion of those costs and about which production men can do nothing.

We have hopes, however, as the painfulness of the cost of "service," supplemented by the production executive's cost records, become acute to the newspaper business executive that the costly luxury of "service" will be eliminated from the newspaper production picture.

Why Does a Belt Run Toward the Large Diameter?

W. F. SCHAPHORST, M. E.

BY making a cone out of an ordinary newspaper as, sketched in Fig. 1, and cutting a straight strip of paper, which in this experiment will serve as a belt, it is easy to demonstrate why belts always run toward the large diameter.

Rotate the cone as though it were a pulley and as though it were pulling the belt on itself in regular belt fashion. It will be found that the tendency of the belt is to wind around the cone in the

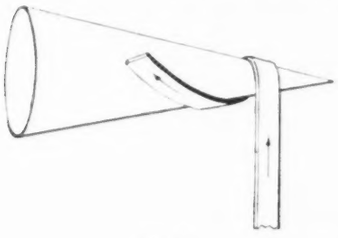


Fig. 1.

direction indicated by the arrows. In other words the invariable natural tendency of the strip of paper is to wind very rapidly toward the large end of the cone, which is the equivalent of a belt running toward the high side of the pulley. No matter how this simple experiment is tried, by either winding the strip frontwards or backwards, it will be found always to wind toward the large end, or, the "high side."

The performer of this experiment will also learn *why* the belt acts as it does — because the belt is stiff and the curvature of the cone is such that it *directs* the stiff belt toward the large diameter. Even if the belt is purposely aimed toward the small diameter, it won't go there; it will move in only one direction — toward the large diameter.

In an exaggerated way, with the addition of dotted lines, Fig. 2 shows the conical shape of one half of an ordinary pulley. Since the tendency of the belt is always to run toward the high side, or large end of a cone, it is plain that by placing two cones base against base, as in Fig. 2, and running a belt on either

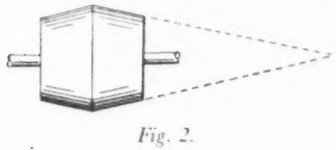


Fig. 2.

one of the cones, the belt will move toward the greatest diameter, and after getting there it will stay there.

By cutting off the peaks of the cones as indicated in the sketch, and reducing the exaggerated slope, a standard crowned pulley is the result. This therefore ex-

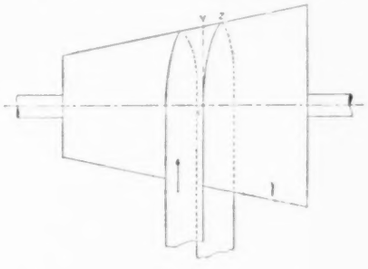


Fig. 3.

plains both why pulleys are crowned and why a belt always runs toward the large diameter. In fact (and here is an argument against the use of belts that are too wide and thin), there are cases on record where wide, thin belts, running on pulleys of high crown, have climbed up the cones with such force as to fold the belts in the middle upon themselves.

An explanation that is somewhat more analytical is shown in Fig. 3. On going upward, the belt first makes contact with the cone at *X*. If the pulley were truly cylindrical the point *X* would, of course, move to *Y*. But on account of the conical shape of the pulley and the stiffness of the belt it actually goes to *Z* and follows the dotted lines on the other side of the cone.

Bookface, Futura, Pen Bold

Among Intertype's new cuttings this month are 11 point Bookface with Italic and Small Caps, 24 point Futura Medium with Oblique and 36 point Pen Bold.

THIS paragraph set in eleven point Bookface duplexed with *Italic and* SMALL CAPS 1234567

11 Point Bookface with Italic and Small Caps

ABC abcdef 234

ABC abcdef 234

24 Point Futura Medium with Oblique

ABabcde123

36 Point Pen Bold

NEW HAMMOND FACTORY ADDITION — *Customers anxious for delivery or factory service, states Hammond Machinery Builders, Inc. of Kalamazoo, Mich., will have no difficulty getting reasonable shipping schedules. Last month, the 60-year-old firm expanded to fill a new and modern plant addition providing more than twice the elbow-room formerly available for manufacturing space.*

The glass and steel addition was designed to give workers utmost light during daylight hours. A new recreation room with showers, wash fountains and lockers, card tables and other recreation facilities, is also included. Part of the addition will house a modern engineering office and demonstration room where Hammond machines will be kept on display.

The factory proper is now equipped with latest type machine tools throughout, giving a substantial increase in production speed and efficiency.

STUD-BLOCK *replacement on line-composing machines outlined for benefit of those not having had experience with this exacting operation*—Part II

By E. B. HARDING*

*Printing Department, State College, Brookings, South Dakota.

WHEN it becomes necessary to renew the vise locking stud blocks, it is advisable to first readjust the mold disk slide. This operation is explained under the sub-head "Adjusting the Mold Slide." The job should be done while the metal is hot.

Not only the mold disk and the disk bearing must be in good condition, but the mold body, 30-pica ejector blade, ejector guide in the ejector slide and trimming knives must also be in fine condition.

Before starting stud and stud block replacement, the mold disk slide should be removed and cleaned. Before returning the slide, oil the sliding surfaces and clean the ways in the column. See that the shoes on the mold turning cam and the brake are set to stop the disk steadily and present the studs without chatter to the stud blocks in the vise frame.

Changing the Locking Studs

Remove the disk and replace the studs. The Linotype disk is removed by taking out the three screws in the plate at the front of the disk. Be careful when replacing this plate to have the oil hole in the up position. The Intertype disk is removed by unscrewing the nut from the rear end of the stud (left-hand thread). If the front nut is removed, the disk and stud should be marked to insure replacing the parts in the same previously relative position. On both Linotype and Intertype, the guide or guides at the left side of the disk must be removed to take the disk from its bearing. The old-style Linotype mold disk stud nut may have either a left-hand or a right-hand thread.

The old-style mold disk locking studs are screwed into the disk. A special wrench is required. The newer studs are held by a special keeper-washer and screw. Use a good screwdriver of the proper size. Have disk and studs free of metal chips and dirt, insert the new studs and set the screws up tightly. Then pink the screw heads with a center punch to crowd some of the screwhead metal into the keeper slots, to prevent them ever becoming loosened. Do not confuse identification of the mold disk stud (mold disk) and the mold disk locking studs.

Adjusting the Mold Slide

If a groove has been worn in the lower mold disk guide where it has contact with the mold disk support screw at the left of the disk, dress off the guide to remove the groove. Apply the mold disk guide but do not restore the disk to its bearing on the slide. Place the slide in the machine.

The mold disk slide left-hand guide screw is now ready for adjustment. This is an arbitrary adjustment, i. e., it is made without respect to the vise frame which is in open position. The adjustment is accomplished as follows: As instructed previously, you have dressed off the bottom surface of the mold disk guide where it bears on the mold disk slide (left-hand) support screw to remove the groove which has been worn in the guide. Turn up the mold disk guide support screw until a 0.003 in. steel feeler gauge can be inserted between the *lower* right side of the mold slide and the left side of the machine column against which the slide bears.[1] Now turn back the adjusting screw until the feeler gauge can be withdrawn with a slight drag, then tighten the locking nut on the adjusting screw. (By the way, don't forget to lubricate the mold disk guide once a week where it bears upon the screw.)

Locating the Stud Blocks

Now apply the mold disk to its bearing on the slide. Apply and adjust the disk guide or guides.

Remove the knife-wiper, knife-block, left-hand knife and spring, and both stud blocks from the vise frame, and clean the seating surfaces.

The upper and lower parts of the right-hand stud block are soft to permit relocating the dowel holes when necessary. Probably the idea is that the dowel holes may be redrilled with a larger drill to relocate the holes in the vise frame and then of course use larger dowels, without plugging up the old holes. If the old holes are to be plugged up, however, they should be drilled and tapped for ¼ in. by 24 pitch screws. After tapping, screw in the ¼ x 24 screws tightly, cut them off flush and dress down to the surface of the casting. The easiest way to plug the old holes, however, in case you can secure a 12x24 tap is to tap out the old hole and fill it with a 12x24 screw, dressing off flush with the vise frame.

A question frequently asked is: May I use a 3/16 in. (0.1875 in.) drill in place of a No. 14 (0.182 in.) drill? The answer is, yes, if you use dowel pins to correspond. Try the dowel pins and the drill in a drill gauge. It is advisable, however, to use the regular dowels (0.1875 in.) and a No. 14 (0.182 in.) drill. Of course, if the drill is not sharpened with the point in the center, the hole is apt to be oversize.

For initial position, the left-hand stud block may be aligned so that the left side of the block is parallel, vertically, to the groove in the mold. Align the right-hand stud block with the vertical surface of the vise frame behind the left-hand knife seat.

Tighten the stud block anchor screws sufficiently to hold them against the vise frame and yet permit movement when the locking studs enter the bushings in the blocks when the mold disk is pulled forward by hand.

The function of the slight movement in the left-hand or floating bushing is to allow for expansion of the mold disk when recasting or when casting large slugs. The block should be set so that the bushing is located as far to the right as it will go when the disk is at about room temperature.

(*Continued on Page 48*)

[1]Some machinists formerly adjusted the Linotype mold slide by providing the 0.003 in. clearance at the top of the mold slide rather than at the bottom. The best practice, however, is to adjust the slide with the 0.003 in. clearance at the bottom as outlined here.

Painless Convention Expense Saving Plan

THE Baltimore Club of Printing House Craftsmen has arranged to supply scrip in denominations of $1, $2 and $5 to treasurers of Craftsmen's Clubs so as to make it easy for members to save toward expenses of the 22nd annual convention of the International Association of Printing House Craftsmen. The convention will be held in Baltimore, next August 10-14. The scrip plan is already in use by the Baltimore Club. Members buy the scrip from time to time when paying club dues in any amount they wish and in the denominations desired. This scrip will be negotiable at the convention registration desk in Baltimore for registration certificates and other regular convention expenses for the member and his wife or guest. It is suggested that club treasurers extend this pre-pay plan privilege to all members and have it include transportation expenses to and from Baltimore.

The close proximity of Baltimore to many printing centers, announces Publicity Director Martin A. Fisher of the Baltimore Club, insures that leadership for the panel discussions will be of an unusually high calibre. The Clinics are now being arranged and the names of leaders will be announced shortly.

Midwest Lithographer Participates Enthusiastically in Christmas Spirit

During December of each year, the Art and Mechanical Staff of the U. O. Colson Company, Lithographers, of Paris, Ill., create and decorate the plant's terraced grounds with an unusual holiday display.

The display for this past holiday season, as shown in the accompanying illustration, includes a star for 1940 and a ringing bell for 1941 — symbolic of the retiring of the old and the coming of the new year — all done in full color with white letters, gold illuminated candles, and the conventional Christmas holly and berries interwoven in the letters. The main Colson Company building is brilliantly flood-lighted each night throughout the year. Surrounded by beautifully landscaped grounds, the ensemble offers a striking panoramic effect.

Printing Equipment Engineer *believes the executives of other printing plants would benefit immeasurably by extending Christmas greetings in similar manner.*

Two-Shift Offset Classes

During January the offset department of the Technical Trade School at Pressmen's Home, Tenn., was put on a two-shift per day basis. This was done to meet the ever-increasing demands for instruction in offset printing. There is a long waiting list now and other applications are coming in almost daily.

This is the first time in the School's thirty years of operation that a double shift for instruction purposes has been employed. All courses given in the School are highly intensive, states Director Thos. E. Dunwody, and, in order for them to be effective, the enrollments must be watched very closely so that no department becomes overcrowded.

In addition to the students comprising these two shifts, the International Printing Pressmen and Assistants' Union has over fifteen hundred members enrolled in the home study course in offset printing.

Addition Under Way

Ground has been broken and construction is already under way on the new addition to ATF's Webendorfer plant at Mt. Vernon, N. Y. The new building will supply approximately 9000 sq. ft. of floor space to house 26 machinists and operators. It is expected that the building will be completed by the end of February, 1941.

S K F Adds Pension Plan

S K F Industries, Inc., Philadelphia manufacturers of ball and roller bearings, has inaugurated an Annuity-Compensation Plan in addition to Social Security benefits, to employes at the retirement age of 65 years.

The company matches the 2½% of average earnings paid by employes between ages 30 and 65 for five years or more service, but pays all back premiums from age 30 to date. This plan is in addition to a group insurance set-up adopted several years ago.

At present 900 of the 3500 S K F employes are eligible for the annuity-compensation plan.

Porter Faces a Second Quarter Century—and a Banquet

AT a colorful dinner given in tribute to his twenty-five years as director of sales for the Harris-Seybold-Potter Company, H. A. (Harry) Porter was a study of surprise and delight. The entire Harris Press organization met to pay him their respect and, as a token of their loyalty, presented the genial guest of honor with a modern motion picture projector —another item to implement his favorite hobby of home movies.

The Porter banquet climaxed a three-day press sales convention January 30, 31, and February 1. Harris Press representatives came to the Cleveland headquarters from various sections of the United States and Canada. The gathering constituted the selling experience of all men, from the newest in service to one who has been talking Harris Offset equipment for 35 years in the person of W. H. Newey of the Harris Boston division. The dinner was attended by more than sixty of the Harris organization, including officials in engineering, manufacturing, treasury, research, planning and service. In addition to officials of the Canadian company, sales executives of the Seybold Division were also present.

R. V. Mitchell, President of the company, acted as master-of-ceremonies and, as at all Harris conventions, the guest emeritus was the veteran founder of the company and one of the original developers of the offset method, A. F. Harris, Chairman of the Harris board.

View of Harris-Seybold-Potter Banquet in honor of the twenty-fifth anniversary of Vice President Harry A. Porter's service to the company as Director of Sales. Standing (left to right) are: W. H. Newey, New England Representative, Boston; President R. V. Mitchell; Mr. Porter; Chairman of the Board A. F. Harris; Philadelphia Representative H. F. Dixon, and A. S. Harris, Vice President in Charge of Engineering.

EQUIPMENT *and Supplies*

Anilox Inking System

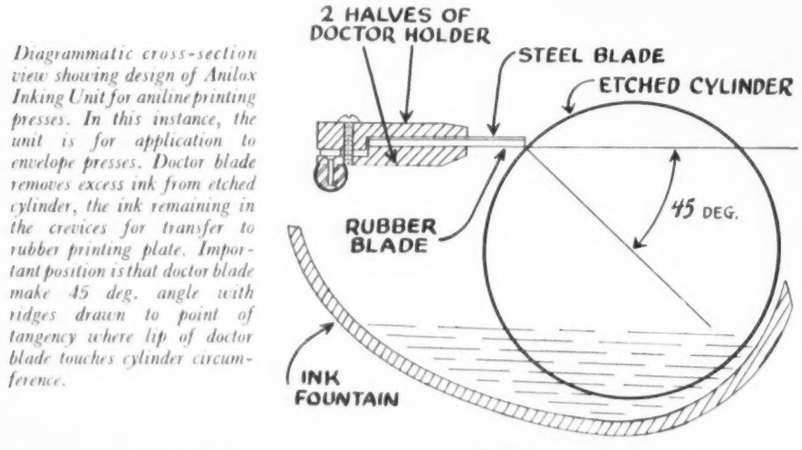
An aniline ink distributing system for envelope printing has been announced by International Printing Ink Division of Interchemical Corporation. The F. L. Smithe Machine Company, New York, is manufacturing Anilox units for envelope presses under agreement with IPI.

The Anilox inking attachment is designed for rotary envelope machines and Harris P2 envelope presses. The attachment is installed by fastening it to the side of the press next the plate cylinder. It consists of a knurled roller in an ink fountain which can be adjusted to ink the rubber plates on the rotary plate cylinder.

A rubber doctor blade functions to assure even distribution of the ink in the knurled crevices of the inking roller. The blade is held in contact position by a spring or screw adjustment and requires no delicate setting.

Through use of the device, manufacturer claims the customary fountain and inking rollers are eliminated; faster production and higher press speeds are achieved; color depth is improved, and "flying," offsetting, sticking, and smudging are practically eliminated. Anilox inks, it is asserted, dry instantly, envelopes may be fed direct from the press into folders. It is announced that the new method also permits the printing of folded envelopes.

Anilox printing is being used for many types of work, including candy wrappers, napkins, tissues, kraft, bread wrappers, cellophane, glassine, pliofilm, aluminum and tin foil and other surfaces.

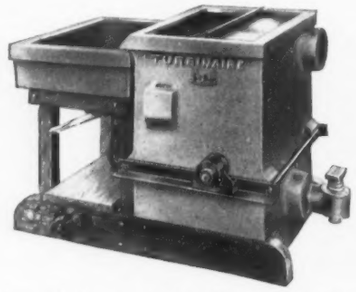


Diagrammatic cross-section view showing design of Anilox Inking Unit for aniline printing presses. In this instance, the unit is for application to envelope presses. Doctor blade removes excess ink from etched cylinder, the ink remaining in the crevices for transfer to rubber printing plate. Important position is that doctor blade make 45 deg. angle with ridges drawn to point of tangency where lip of doctor blade touches cylinder circumference.

Pressman is attaching rubber printing plate to the cylinder of a Harris P2 envelope press. Anilox inking unit in foreground.

Junior Etching Machine

A Junior Size Turbinaire Photo-engravers' Etching Machine, taking zinc plates up to 19 in. by 19 in. size, has been announced by United States Stoneware Co. For zinc etching, this Junior machine is equipped with unbreakable stainless steel paddle in place of the sectional hard rubber paddle as used in copper machines.



View of Junior Model Turbinaire Photo-engravers' zinc Etching Machine—accepts plates up to 19 in. by 19 in.

Incorporated in the new model zinc etching machine is a separate motor for driving the ventilating fan.

Further information may be obtained from the United States Stoneware Co., direct, or through *Printing Equipment Engineer*.

Vandercook Block Leveller

Vandercook & Sons announce the New No. 10 Vandercook Block Leveller, for permanent, precision accuracy under heavy duty use.

This Leveller will take both wood and metal mounted plates up to 12½ in. by 18 in. Easily read dial permits accurate cutting to predetermined block height. No calculating is necessary.

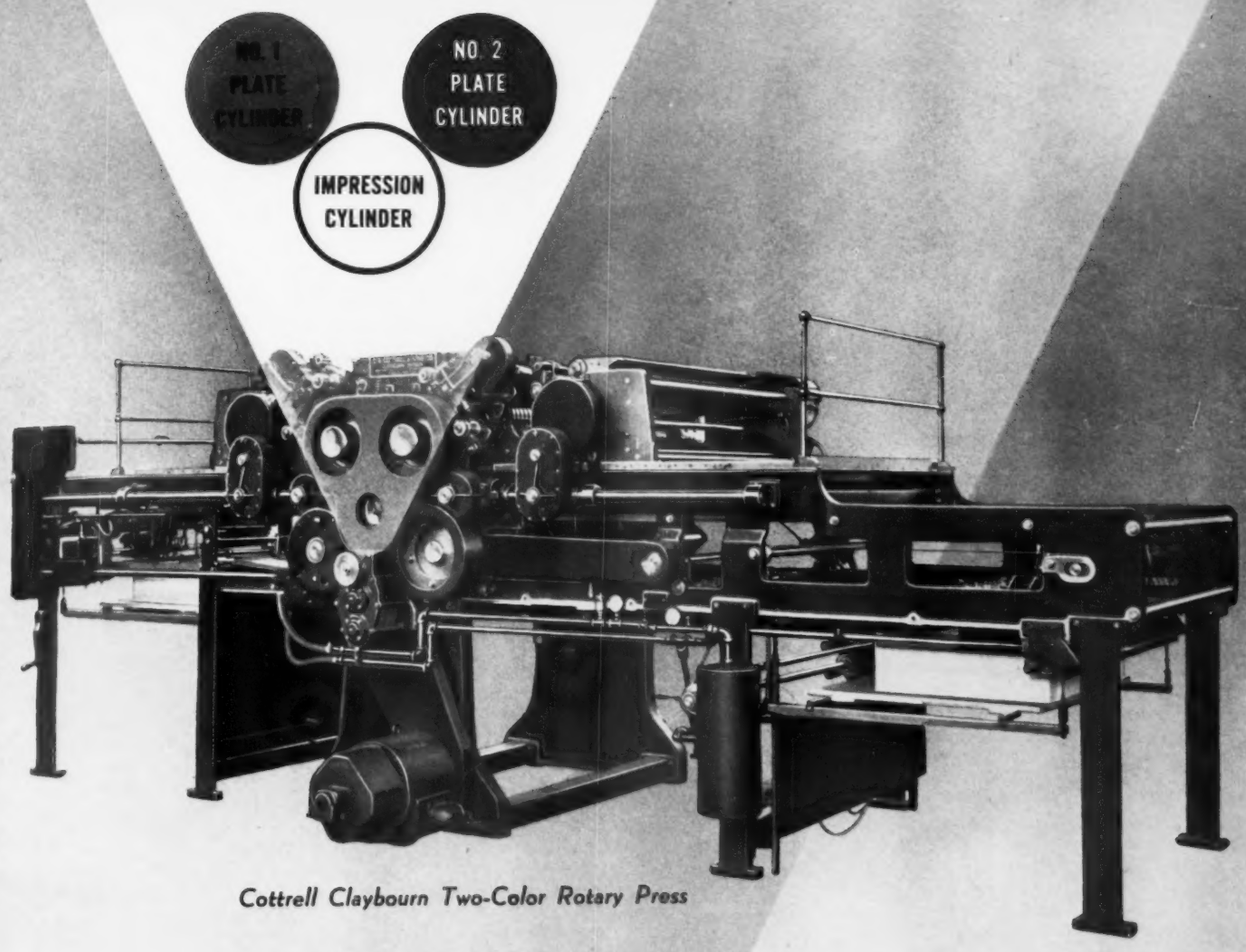
The size of the cutter motor has been increased from ½ to 1 h.p.

The work table is driven by an individual motor which controls the speed of rotation and provides smoother operation. An automatic brake is a new feature. The plate clamp has been redesigned. Both motors are started and brake released by a foot pedal. Dust and chip removing devices insure clean operation.

First Annual Printing Banquet

The first annual printing banquet of the Kansas State Teachers College was attended by a large number of students, educators and printers. John A. Backus, Manager of the Department of Education of American Type Founders Sales Corporation, was the principal speaker. He discussed the relationship between educators and printers.

Others who took part in the program were Laurence G. Cutler, club sponsor; Dr. C. B. Pyle, Dean of the College, who served as toastmaster; Philip Brink; Marvin Hollenbeck, President of the Club; Dr. W. T. Bawden, Head of Industrial and Vocational Dept., and Professor Leroy Brewington, Supervisor of Printing.



Cottrell Claybourn Two-Color Rotary Press

Insuring accurate register

even at speeds up to 5000 sheets an hour

With the Cottrell Claybourn Two-Color Rotary, there is no transfer of the sheet from one impression cylinder to another. Both plate cylinders operate on a single impression cylinder, as shown in the accompanying diagram. The sheet goes through the press with only one gripper bite . . . insuring accurate register even at speeds up to 5000 sheets an hour. Net production reported by users averages up to 4000 sheets (two colors) per hour. Combining high speed, hair-line register, and unsurpassed distribution, the Cottrell Claybourn Two-Color Rotary is a peerless profit-earner.

Write for particulars.

C. B. COTTRELL & SONS CO., WESTERLY, R. I.
NEW YORK: 25 East 26th Street • CHICAGO: Daily News Building
CLAYBOURN DIVISION: 3713 N. Humboldt Ave., MILWAUKEE, WIS.
SMYTH-HORNE, LTD., 1-3, Baldwins Place, Gray's Inn Road, LONDON, E. C. 1

CLAYBOURN DIVISION
2-COLOR ROTARY PRESSES

Cottrell

Letterpress-Offset Duplicator

Davidson Mfg. Corporation has announced what it calls the Two-Purpose Duplicating Machine for production by letterpress or offset of letterheads, envelopes, advertising folders, office forms, imprinting and the like. Printing elements may be offset plates, type, electrotypes, or rubber plates. The machine will handle stock in any size from 3 in. by 5 in. to 10 in. by 14 in. It is claimed the stock can be of any kind from light weight paper to cardboard and envelopes. Production speeds are said to range up to 6000 imp. per hr.

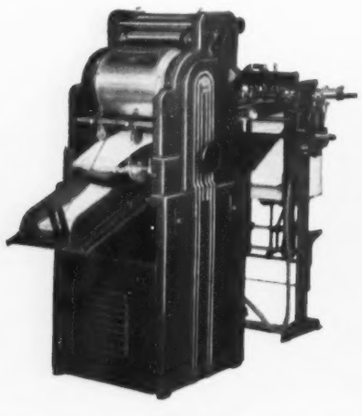
As is stated above, the machine will produce letterpress and offset duplicating work. The changeover from one method to the other requires 5 min. time. Instead of employing the usual three cylinders for offset work, only two are required. This is accomplished by combining the plate cylinder and the impression cylinder as two segments of one large cylinder frame operating in conjunction with a blanket cylinder, permitting the use of the same two cylinders for letterpress duplicating. The upper cylinder is twice the circumference of the blanket cylinder, making only one revolution while the blanket cylinder makes two. As the large cylinder revolves in offset work, the plate segment transfers its image to the blanket and as the impression segment reaches the blanket cylinder the paper is inserted and the image is transferred to the paper.

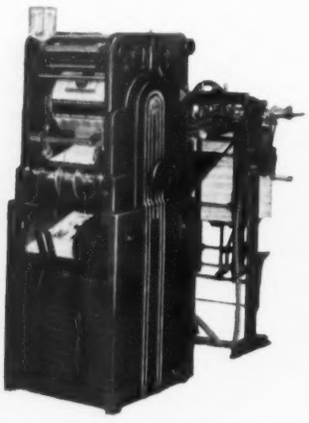
When the press is to be used for letterpress, the offset plate segment is removed and a segment for loose type and electros or for rubber plates. The blanket cylinder then becomes the impression cylinder or platen. In letterpress work, of course, the dampening mechanism is removed.

Press is supplied with Davidson Suction Feeder, and a continuous load friction feeder is also available. Suction feeder is fitted with double sheet eliminator. Two sheet detectors are incorporated in the machine. The first detector functions so that if two or more sheets start through at one time, they are immediately dropped into a tray below the feeder. When this occurs, however, the machine is not stopped and there is no interruption other than the loss of one impression. The second detector functions as the paper reaches the cylinder and causes the lower cylinder to drop out of position if a sheet is missing. This prevents piling of ink on the blanket in offset work, or, in the case of letterpress printing, prevents inking of the platen.

Three types of offset plates are available: (1) Copy may be typed on a special paper-backed plate and signatures, rules lines, diagrams and the like may be drawn directly on the plate with special ink; (2) Typed forms may be proofed directly upon another type of plate, and (3) Another type of plate is supplied for photographic plate making which is said to give fine detail in half-tone work.

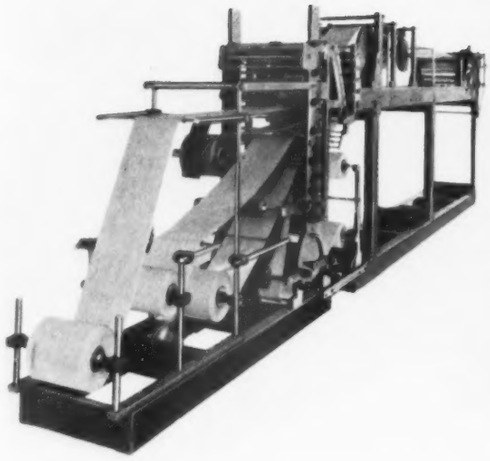
Weight of the press with suction feeder is 726 lbs. Grippers are a part of a chain mechanism. The grippers take the lead edge of the sheet and hold it until released for delivery into the paper catcher.





Printing at speeds up to 6000 imp. per hr., the Davidson Dual Duplicator accepts up to a 10 in. by 14 in. sheet. Machine is convertible from letterpress to offset work. Changing the machine from one method to the other is said to require approx. 5 min. time.

View at left shows Duplicator set up for letterpress printing. View at right shows machine ready for offset work. Instead of employing the usual three cylinders for offset work, only two are required. Machine is intended to handle letterheads, envelopes, advertising folders, office forms, imprinting and the like.



View of ATF-Webendorfer's all-rotary collating machine which is designed to keep pace with production of modern web snap-out and form offset presses.

Rotary Snap-Out Form Collating Machine

Webendorfer Division of American Type Founders, Inc. announces an all-rotary Collating Machine which is designed to keep pace with the production speed of modern web snap-out and form offset presses.

The unit is built to handle various combinations of paper and carbon, such as 7 parts paper and 6 parts carbon or 5 parts paper and 4 parts carbon. Other special combinations can be handled on the same equipment.

In operating the machine, both paper and carbon are fed from rolls and are handled in straight line operation. In collating the paper and carbon ribbons, the machine glues along one edge automatically, aligns for register and delivers in cutoff sheets. The standard machine permits sheets to be cut off in multiples of 4¼, 8½, 11, 17 and 22 in., but provision can be made to furnish cutoffs in special sizes when needed.

The machine has a capacity of 8000 collated and glued snap-out forms per hour. A motor of 2 h.p. is required to drive it. The basic pattern of a web press where the web is under constant control from feed to delivery is followed in construction of this machine, thus making it possible to introduce into the production line several additional operations, such as stitching or perforating.

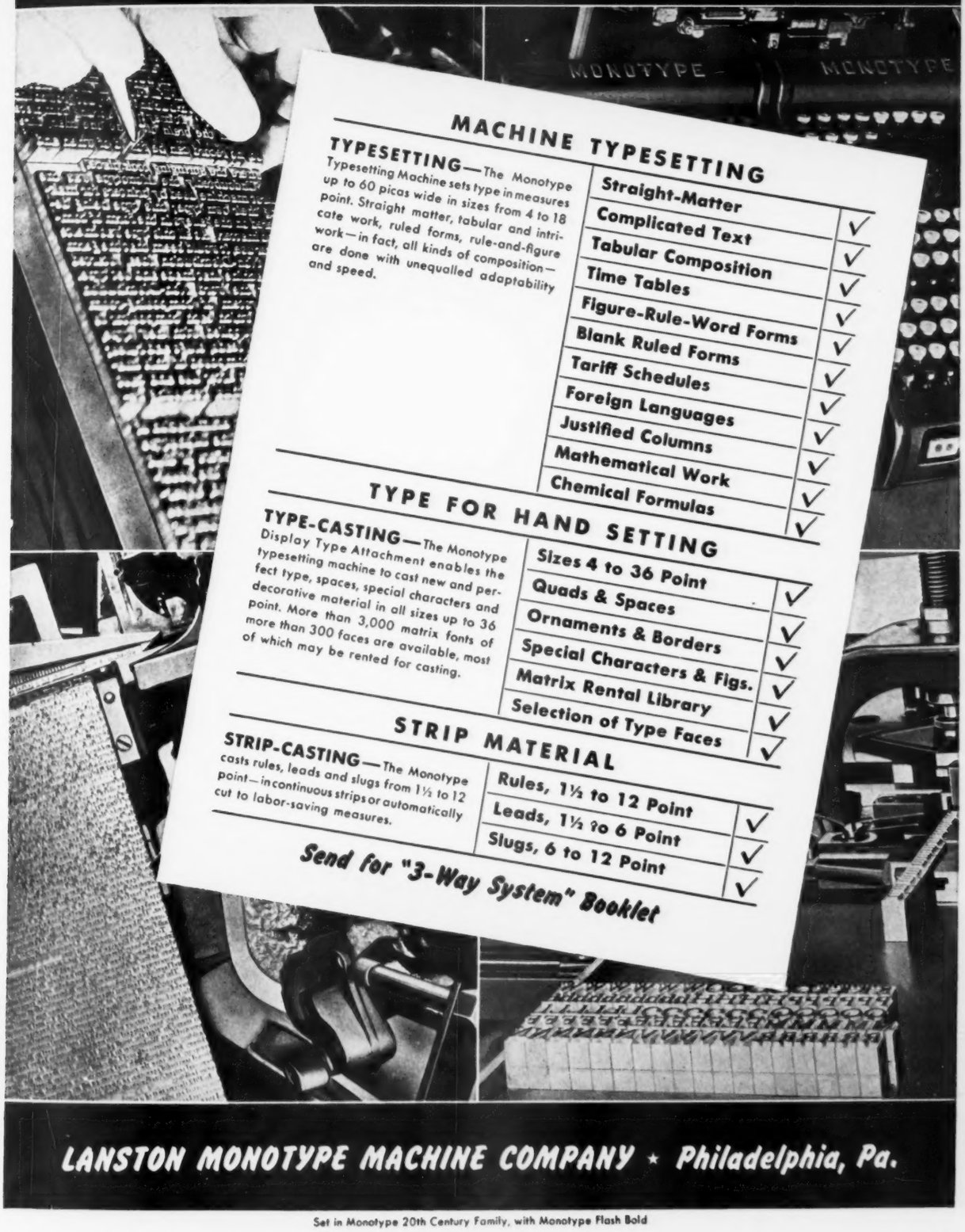
Research Clinic

On Thursday evening, February 20, a Research Clinic will be held at General Printing Ink Galleries, 100 Sixth Ave., New York. The Clinic is one of a series of Printing and Advertising Clinics sponsored by General Printing Ink Corporation.

The following subjects and speakers have been announced: *Research in Industry*, by Vice President Walter L. Landis of the American Cyanamid Co.; *Research in Markets*, by Elmo Roper, Market Analyst, and by Dr. William F. Talbot, General Printing Ink's Research Director, who will discuss *Research in Printing Inks*.

Only the Monotype checks 100%

against this CHART OF COMPOSING-ROOM SERVICE



MACHINE TYPESETTING

TYPESETTING—The Monotype Typesetting Machine sets type in measures up to 60 picas wide in sizes from 4 to 18 point. Straight matter, tabular and intricate work, ruled forms, rule-and-figure work—in fact, all kinds of composition—are done with unequalled adaptability and speed.

Straight-Matter	✓
Complicated Text	✓
Tabular Composition	✓
Time Tables	✓
Figure-Rule-Word Forms	✓
Blank Ruled Forms	✓
Tariff Schedules	✓
Foreign Languages	✓
Justified Columns	✓
Mathematical Work	✓
Chemical Formulas	✓

TYPE FOR HAND SETTING

TYPE-CASTING—The Monotype Display Type Attachment enables the typesetting machine to cast new and perfect type, spaces, special characters and decorative material in all sizes up to 36 point. More than 3,000 matrix fonts of more than 300 faces are available, most of which may be rented for casting.

Sizes 4 to 36 Point	✓
Quads & Spaces	✓
Ornaments & Borders	✓
Special Characters & Figs.	✓
Matrix Rental Library	✓
Selection of Type Faces	✓

STRIP MATERIAL

STRIP-CASTING—The Monotype casts rules, leads and slugs from 1½ to 12 point—in continuous strips or automatically cut to labor-saving measures.

Rules, 1½ to 12 Point	✓
Leads, 1½ to 6 Point	✓
Slugs, 6 to 12 Point	✓

Send for "3-Way System" Booklet

LANSTON MONOTYPE MACHINE COMPANY ★ Philadelphia, Pa.

Set in Monotype 20th Century Family, with Monotype Flash Bold

February 10, 1941

AN OPEN LETTER
TO OUR FRIENDS IN THE NEWSPAPER FIELD

It is our thought that the facilities of any manufacturing organization should primarily be at the disposal of the government. We are cooperating to the full extent of our ability with the United States in its defense program.

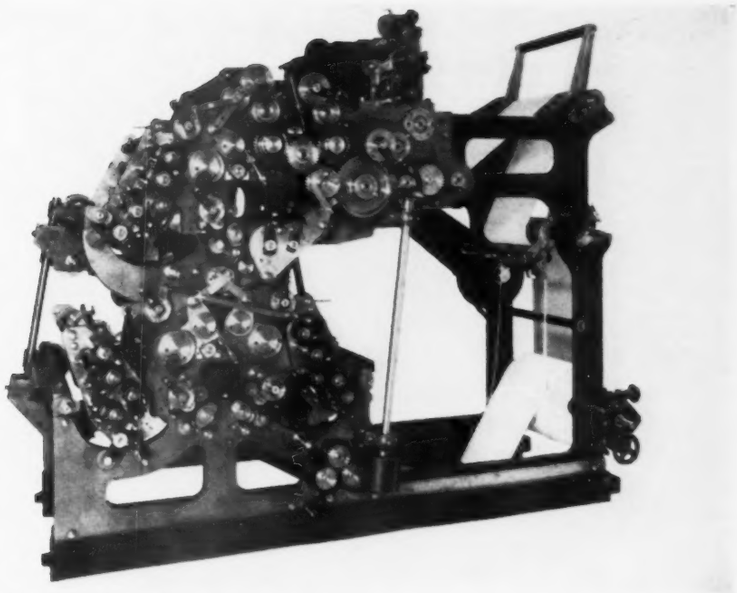
The utmost will be done to take care of our friends and customers in the newspaper field, but we believe that you will agree that in all cases the requirements of our National Defense come first.

Many materials are assigned to priority rights of the War Department at this time and cannot be obtained immediately. We would appreciate it if your requirements could be anticipated as much as possible in the future.

As always your needs will receive our expert and prompt attention.

THE DUPLEX PRINTING PRESS CO.
BATTLE CREEK, MICHIGAN, U. S. A.

The Right Bearings



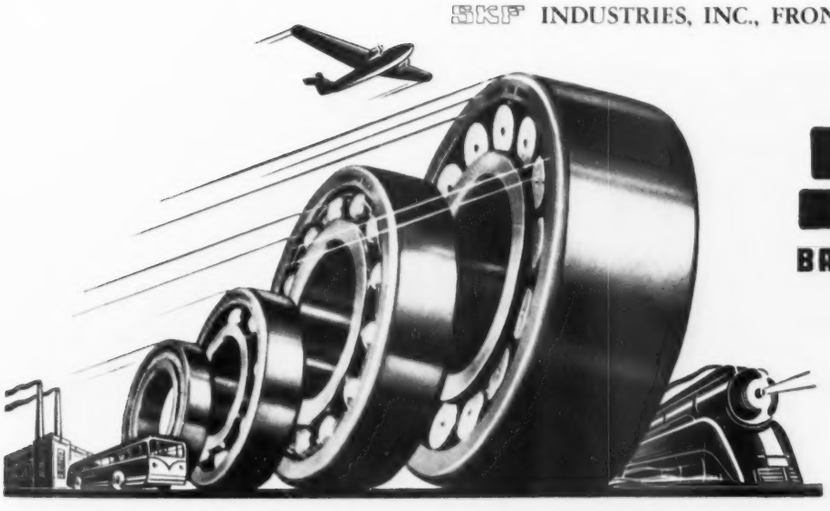
BUILT BY MEISEL PRESS MFG. CO.

FOR OFFSET WORK

EIGHTEEN thousand impressions per hour in manifolding work is what this Web Offset Press demands of SKF Bearings. And SKFs respond with the inherent alignment, high accuracy, low lubricant consumption and low friction that's reflected in high speeds, low maintenance costs and accurate register and impressions. What would these advantages mean to the presses *you* build?

4730

SKF INDUSTRIES, INC., FRONT ST. & ERIE AVE., PHILA., PA.



SKF

BALL & ROLLER BEARINGS

Flint Celebrates 21st Birthday

In celebration of the company's 21st birthday, 162 employes of the Howard Flint Ink Company attended a dinner at the Hotel Statler in Detroit on January 8. Sales representatives from all parts of the country met with the Detroit factory staff.

Dedication of a beautiful new building added to the company's Detroit factory group occurred at this time. The building is a two-story brick and concrete structure, providing an additional space of 16,000 sq. ft. It houses the new laboratory facilities and a comprehensive experimental printing department, in which is being installed press equipment for every printing process. The laboratory and experimental departments provide facilities for solving problems in a practical way for newspapers, printers and lithographers.

The Howard Flint Ink Company was established in March 1920. In addition to the extensive manufacturing plant in Detroit, the company now has factories in seven other cities through the Middle West and South. The company also has agents in South America and maintains other export markets.

ITCA Activities

The first of a series of six direct mail brochures prepared for group or individual mailing by members of the International Trade Composition Association has been issued. The brochure consists of eight pages, 5¼ in. by 7⅞ in. Title of the brochure is Meet the Trade Compositor —He Helps Make Printing a Better Business. The booklet informs the reader what the trade compositor is and what he is doing for the industry. Typography in the booklet is decidedly agreeable.

Reproduced here is the prize-winning emblem picked by a committee of three judges from among 45 designs submitted by artists, layout men and designers. The contest conducted by the International Trade Composition Association recently. The designer of the prize-winning emblem is Edwin W. Shaar of Philadelphia.

The judging committee consisted of Herbert F. Czarnowsky, immediate past

president of the Association; Art Director Sol Hess of the Lanston Monotype Machine Co., and Clayton Whitehill, commercial artist.

(Received too late for Classification in the Press Specification Section of the 1941 Where-to-Buy Catalog—These additional Specifications can be inserted in Your Copy of the Catalog)

PRINTING PRESS SPECIFICATIONS—LETTERPRESS, OFFSET, GRAVURE

Maximum and Minimum Sheet Size, Inside Chase Capacity or Maximum Plate Area and Impressions per Hour or Rotary Production of Platen, Cylinder and Rotary Letterpress Machines, Offset Presses, Newspaper Presses, Aniline Presses and Sheet- and Roll-feed Gravure Presses, according to manufacturers' specifications

NEWSPAPER PRESSES (High Speed Rotary)

MAKE AND MODEL	Max. Web Width	Max. Ptg. Width	Min. Cyl. Circumference	Max. Cyl. Circumference	Speed-Copies Per Hour
Duplex Super Duty Color cylinder may be applied to any unit.	76 in.	8 col., 12½ ems 6 pt. col. rules	21½ in.	23 9/16 in.	60,000
Duplex Unitubular Four-page black units. Color cylinders may be applied to any printing unit. All printing couples may be single or double reversed. Any possible color combination may be obtained by addition of standard double reversible mechanisms. One plate per color per page to register up to full capacity of press.	38 in.	8 col., 12½ ems 6 pt. col. rules	22¾ in.	23 9/16 in.	40,000
Duplex Standard Tubular Color cylinders may be applied to any printing unit. By using twinned 16-page presses, 60,000 16-page papers per hour may be printed.	38 in.	9 col., 12 ems 6 pt. col. rules	22¾ in.	23 9/16 in.	30,000

NEWSPAPER FLATBED WEB PRESSES (Roll Feed)

MAKE AND MODEL	Sheet Size	Max. Form In Chase	Max. Form In Bed	Impressions Per Hour
Duplex Model A Prints 4, 6 or 8 page papers; also one or two page bills. May be arranged to print 4 pages in one color and black.	22½ in. cutoff by 70 in. web	16½x21½	16½x21½	3,500
Duplex Model E Prints 2, 4, 6, 8, 10, 12, 14 or 16 page papers; delivers product in either one or two sections as desired. May be arranged to print 4-page paper in two colors.	22½ in. cutoff by 77¾ in. max. web	17⅞x21½	17⅞x21½	6,000

Resilient? Yes...

but

VULCAN'S BALANCED CYLINDER PACKING

is also firm enough for sharp, clean printing

Hard enough to insure good printing of pictures, small type, and heavy solids . . . with enough resilience to compensate for normal surface variations in stereotype plates . . . that's Vulcan's BALANCED press blanket combination (No. 67 Non-Felt Top Blanket and No. 76 Cork Underpacking).

This combination gives you a fresh, smooth-as-glass printing surface for every press run. No bolstering . . . no ghosting . . . no indentations of any kind, even if plates are left on the press overnight.

Write for more information on Vulcan's BALANCED press blanket combination . . . and for specific recommendations to suit your particular requirements.

VULCAN PROOFING COMPANY
First Ave. and Fifty-Eighth St., Brooklyn, N. Y.
SALES REPRESENTATIVES IN PRINCIPAL CITIES

VULCAN

Press Blankets and Inking Rollers

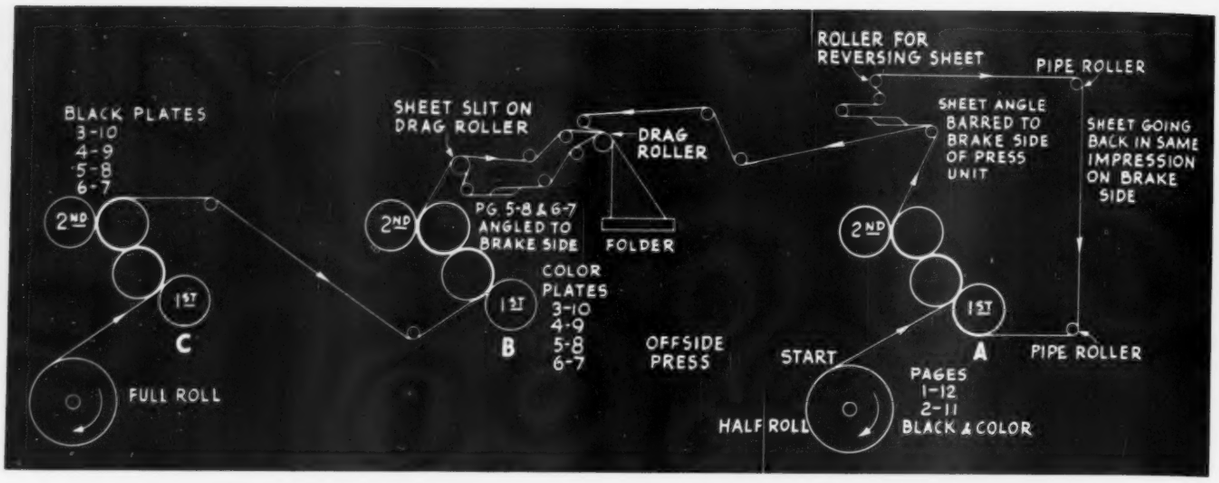


Diagram shows how Pressroom Foreman Wm. E. Higham of the Transcript Press, Inc., prints a 12-page paper with black and color on all 12 pages on a Hoe unit-type sextuple press. Fountains were split with an improvised divider and the rollers also were sectioned in the center. We hope our readers will allow for the "poetic license" our draughtsman has taken in this diagram.

Sextuple Press fitted to print paper with black and color on all 12 pages in Massachusetts plant

By WILLIAM E. HIGHAM*

*Pressroom Foreman, The Transcript Press, Inc., Dedham, Mass.

SOME time ago, we found a way to print color on our Hoe double-width unit-type 24-page press. Otherwise, our firm would be compelled to "pass up" a lot of color work. Since the trend now in all branches of the printing industry is toward the use of more color, we wished to avail ourselves of the opportunity for securing color work wherever possible.

On our press, we have printed a 12-page paper with color on all of the 12 pages. The leads of the sheets are shown in the accompanying diagram. The paper can be run as a solid sheet, or in two sections, 8-4-12 pages, transferring the 4-page section.

On Unit *A* shown in the diagram, a half-roll is hooked up, and a full roll is run on Units *B* and *C*. The half-roll is webbed up on the offside of unit *A*, where pages 1-12 and 2-11 and printed in black. The web is angle-barred down to the same impressions in Unit *A* on the brake side to print color on pages 1-12 and 2-11.

Recently, an advertiser wished to run a 12-page paper with color on pages 1-12, 2-11, 5-8 and 6-7. Under ordinary conditions it would be necessary to employ four units, but we printed with our regular three-unit equipment as follows: A half-roll was run on the offside of the press, printing the color on pages 1-12 and 2-11. The sheet was angle-barred (by installing two pipe rollers) to the brake side of the press and down into the first and second impression to pick up the black pages 1-12 and 2-11.

These are what might be called "split fountain runs." The fountains were split by shaping two pieces of stereo shell casts (approx. 0.153 in. thick) placing them about 1 in. apart in the fountain. The space between the two partitions was then filled in with plaster of paris. The fountains are water-tight and have been in use for over a year and have never leaked.

The rollers used in connection with the split fountains, of course, must be channeled in the center, about an inch cut being taken out of the roller.

The sheet holds excellent register and the press can be operated at nearly normal speed.

Modern man cannot be

Modern man cannot be

14 point Caledonia with Bold

Modern man cann

Modern man cann

18 point Spartan Black with Italic

Modern man cannot be s

Modern man cannot be s

18 point Spartan Black Condensed with Italic

ΑΒΓΔΕΖΗ ΘΙΚΛΜΝΞΟ ΠΡ

12 point Linotype Coptic

Some New Linotype Faces

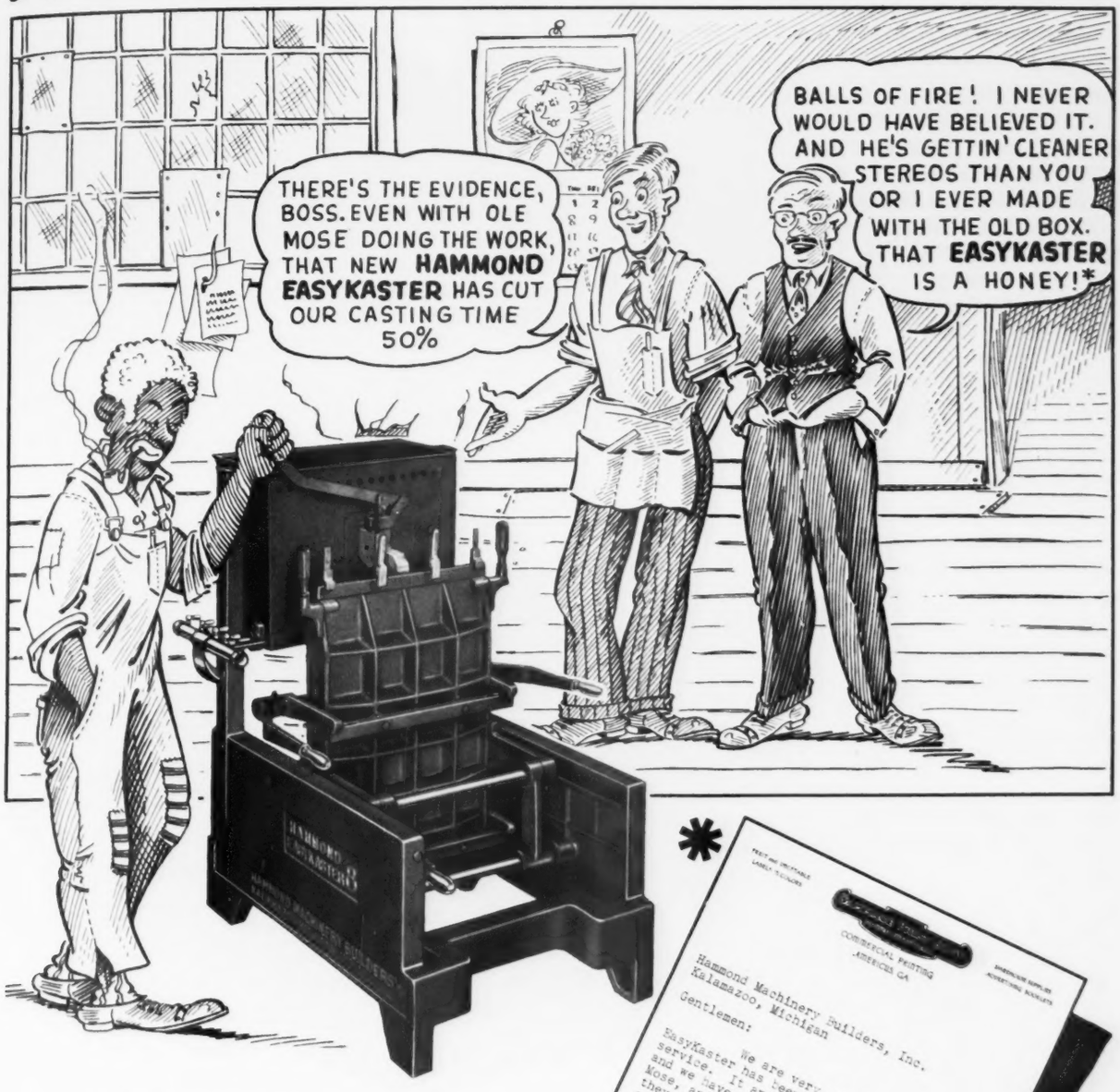
"Among the new faces recently made available by the Mergenthaler Linotype Company," says Vice President C. H. Griffith, "Caledonia is now duplexed with a bold face of the same design for book and commercial printing and for publication advertising. Sizes from 6 to 14 point will be ready soon."

Other recent linotype faces are shown here.

Appointed Assistant to Chief Engineer

—R. H. Hathaway, formerly sales engineer for Production Machinery Company, Greenfield, Massachusetts, has been appointed Assistant to Chief Engineer Henry J. Kingsbury, Hammond Machinery Builders, Inc., Kalamazoo, Michigan, it was announced recently by President W. C. Hammond.

Hammond FLASHES FROM LIFE


THERE'S THE EVIDENCE, BOSS. EVEN WITH OLE MOSE DOING THE WORK, THAT NEW HAMMOND EASYKASTER HAS CUT OUR CASTING TIME 50%
BALLS OF FIRE! I NEVER WOULD HAVE BELIEVED IT. AND HE'S GETTIN' CLEANER STEREOS THAN YOU OR I EVER MADE WITH THE OLD BOX. THAT EASYKASTER IS A HONEY!*

Hammond Machinery Builders, Inc.
Kalamazoo, Michigan

Gentlemen:

We are very glad to say that our EasyKaster has been giving us the very best service. It answers all our requirements, and we have a negro boy, whom we call Ole Mose, and I can assure you he is as slow as they come, still he is able to do all our casting. This just goes to show how easy this machine is to operate.

Wishing you much success, we are

Very truly,

Gammage Print Shop

Manager

ELG/vh

Today the easiest way is the better way. An EasyKaster in your shop can save up to 50% in casting time . . . cut effort to a minimum and give you more perfect casts. Four bed sizes. Have us send new descriptive bulletin.

Write today to . . .

Hammond Machinery Builders
INCORPORATED
KALAMAZOO, MICHIGAN, U.S.A.
1604 DOUGLAS AVENUE

Mauritz Christian Indahl Passes

ONE of the important figures in the printing equipment engineer field passed away Friday, January 24. Mauritz Christian Indahl was 72 years of age. Cerebral hemorrhage was the cause of death. His fertile brain was actively engaged in carrying on its work almost up until the moment of his passing at Jefferson Hospital, Philadelphia. He had been chief of Monotype's engineering staff since 1919.

Mr. Indahl was born in the town of Vestre Toten, in Norway, on September 1, 1868. He came to America in May, 1982. In 1895, William Sellers & Company, Philadelphia, with which firm he was associated, undertook a contract to build 400 typesetting machines for the Lanston Monotype Machine Company of Washington. Indahl was appointed assistant to Mechanical Engineer J. Sellers Bancroft in the work of converting the inventions of Tolbert Lanston into practical form. In 1900 the Monotype machine was offered to the trade.

More than 100 inventions have been credited to Monotype's Mauritz Christian Indahl who passed away recently.

In 1902 the Monotype Company moved its headquarters from Washington to Philadelphia and took over the development and manufacture of its own machines. Mr. Bancroft was appointed chief engineer and Mr. Indahl was made his principal assistant. Upon Mr. Bancroft's death in 1919, Mr. Indahl was made chief engineer.

Mr. Indahl was actively engaged in working on the design of improvements to the Monotype almost up until the day of his death. Two days before his passing, he finished important drawings of a part of the mechanism of a newly inproved typesetting machine on which he had spent most of his time during the past four years.

It has been said that Tolbert Lanston had thought of the Monotype as a mechanical means for setting type, having no conception that the principles involved in his hot-metal typecaster would eventually form the basis for the creation of other machines for casting type in sizes up to 72 point, and to make rules, decorative borders, and leads and slugs in strips, which would be used in the then unknown non-distribution method.

Indahl played an important part in expanding the scope of the Monotype typecaster to make display type for hand use. This machine was put on the market in 1905. He also participated in the design and development of the first strip lead, slug and rule casting machine introduced in 1914. He was inventor and designer of the Monotype Material Making Machine introduced in 1921, and the Giant Caster, first marketed in 1926.

Mr. Indahl was active in the design and construction of the lithographic photo-mechanical equipment produced by Monotype since purchase of the assets of the Directoplate Corporation in 1932. This work he carried on in collaboration with Monotype Technical Adviser William C. Huebner and Assistant Engineer Joseph P. Costello.

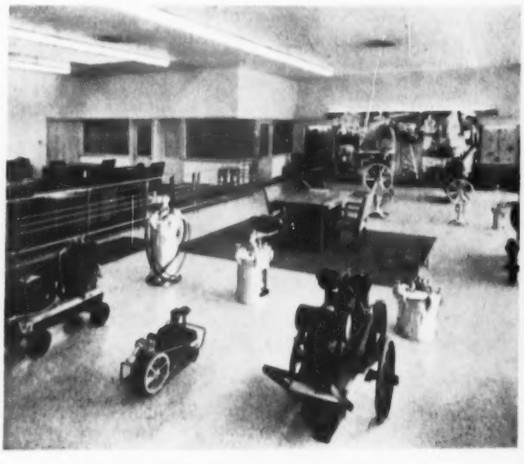
Mr. Indahl's inventive ability was prolific. During his lifetime, he had filed with the U. S. Patent Office applications for more than 100 inventions.

In February, 1940, Mr. Indahl was presented a Modern Pioneer Award by the American Association of Manufacturers. He was an active member of the Philadelphia Club of Printing House Craftsmen and a number of other organizations.

He is survived by his wife, three sons and a daughter.

A New Sales and Service Branch *was opened recently in Chicago by the DeVilbiss Company at 1280 West Washington Boulevard. The branch is housed in a new building owned by DeVilbiss.*

Features of the new building are a spacious room for the display of the Company's industrial and service products; a department where a manufacturer can test spray coating as applied to his particular product and facilities for the servicing of equipment.



View in display room of DeVilbiss's new building in Chicago.

EMPLOYMENT

AND SERVICE

Employers, production and mechanical executives may insert notices in this department. Items may pertain to the following subjects: "Executive Wanted," "Association or Partnership Wanted," or "Position Wanted," readers referring to subjects of a personal nature such as obtaining information about addresses of executives, supplying copies of technical articles and magazines, patents for sale or requests for contacts for developing and/or financing of inventions.

Any reasonable request from an employer or mechanical executive for the printing of a notice upon a subject other than the ones listed above will be granted.

Notices may be printed under the following regulations: First insertion (maximum six lines) is free of charge. All subsequent insertions of the same item subject to a charge of 75c per line in advance.

Address all communications with box number to *Printing Equipment Engineer*, 1276 West Third St., Cleveland, O.

WANTED—Non-union stereotype foreman; must be superior craftsman, have highest recommendations, steady, sober; appreciate attractive, steady job and good environment. Reply Box 118.

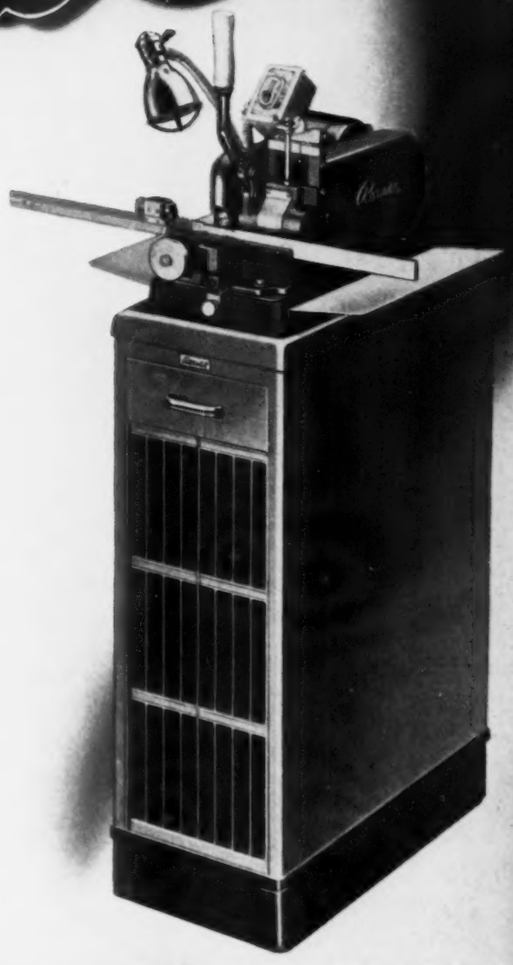
ART DIRECTOR—Thoroughly practical in photo-engraving, rotogravure, etc. and who has acted as production manager, seeks position. Can streamline Art, Engraving, Electrotyping and Stereotyping under one directing head with efficiency and economy. Reply Box 119.

Reprints Reckoner

Intertype Corporation has revised and reprinted its *Ready Reckoner*. The booklet contains copy-fitting tables for all Intertype faces and a general table applicable to all faces where the alphabet length is known. Copies may be secured by sending your request to Intertype Corporation, 360 Furman Street, Brooklyn, N.Y., or the nearest branch office.

re You Losing Business Because of

Price



In every city there are printers consistently reasonable in price who do quality work---yet MAKE A PROFIT.

There is no magic about this. Careful study of operations, and efficient methods enable some printers to turn out work at minimum cost. Since quotations are based on estimated cost, work is priced lower, even after allowing a generous margin.

Mitering may seem an inconsequential part of composition. A definite study will PROVE DIFFERENTLY.

The ROUSE Vertical Rotary Miterer does more than cut 1000 miters an hour. It is more than a time and labor saver. It miters ACCURATELY to EXACT MEASURES. It insures neat corners that JOIN. In addition, it makes hundreds of interesting borders and ornaments from linotype or strip rule.

There are hundreds of Rouse MASTER Vertical Miterers in larger plants throughout the world. During the past year hundreds of Rouse ECONOMY Vertical Miterers have been installed in SMALLER plants.

Complete information and prices on the Master, Economy, and 36 point Vertical Miterers will be sent at your request, and without obligation. Write today.

FREE!

Catalog of Rouse Time Saving Tools for Printers.

H. B. ROUSE & COMPANY

2216 NORTH WAYNE AVE., CHICAGO, ILL.

Inks *for letterpress are not compounded for use on offset-lith presses and do not meet peculiar requirements of the process*

By ADAM HENRI REISER

"WHAT differences exist between offset, letterpress and rotogravure inks? . . . There is not much difference between offset and letterpress inks. Rotogravure ink is an entirely different proposition. It is a much thinner ink with almost instantaneous drying. A letterpress pressman *can* use offset ink by softening it up, but rotogravure ink is too fast drying for letterpress or offset." Part of this quotation, taken from a recent issue of *Share Your Knowledge Review* provoked this article.

Ink is one of the most important ingredients of the finished printing product. Dry colors used in ink manufacture comprise a series of complicated chemical reactions requiring minute attention to temperature control, mixing, washing, dehydration and other numerous steps in the making of the pigments alone. Following that, the pigment is ground in the proper vehicle to suit the "Three P's": *Process* used in printing; *Paper* upon which it is printed, and the *Purpose* of the finished job.

Ink Composition

Ink composition varies with the process used; it also varies in the process with the paper used. Ink composition could vary on two jobs, printed by the same process, on the same paper, but used for a different purpose. It was found, for illustration, that a certain brown ink worked well on a paper until the commodity was enclosed in a wrapper of cellophane. Then the brown acted queerly after a period of time; the printing finally being no longer legible. The ink was then doctored to withstand the reaction set in motion by the new set of conditions.

Letterpress inks must have fair coverage, minimum deteriorating action on the plate through chemical or abrasive action, combined with proper compounding for drying and also to enable the following colors to lift properly.

Offset-lith inks, on the other hand, require a high degree of concentration, and much greater freedom from acidity and alkalinity than letterpress inks. Needless to say, the pigments must be well washed of the acids and alkalies in which they may have been formed. Otherwise the finished ink will attack the metal or the image from which the printing is produced.

Colors From The Clear

To get a fleeting glimpse of the magic of pigment making, a few cents worth of chemicals, and a few test tubes, will be all that is necessary. Then you can emulate the magician who poured two colorless liquids together to produce a wine colored concoction.

First, we'll pour two colorless liquids together to make white lead. Accurate measurements are not necessary in this work, the idea being to just get the reactions. Dissolve about a gram of lead nitrate (a white salt) in 10 cu. cent. (about ⅓ oz.) of water. A clear liquid will result. Add to that another clear liquid in the form of a solution of sodium carbonate, made up by dissolving a few grams of sodium carbonate in 10 cc of water. A few cc of the sodium carbonate solution added to the lead nitrate solution produces a white precipitate of white lead.

From another clear solution of lead nitrate we'll form chrome yellow. To another 10 cc solution of lead nitrate made up as above, add 3 cc of potassium chromate solution made up by dissolving about 6 grams of potassium chromate in 3 cc of water. This time a yellow precipitate falls out of solution as a result of mixing the colorless lead nitrate solution and the weak yellow chromate solution.

Last we'll produce a dark blue color from two yellow liquids. Two grams of the salt ferric nitrate are dissolved in 10 cc of water in a test tube. In another dissolve 3 cc of ferrocyanide of potassium in 10 cc of water. Addition of 3 cc of the ferrocyanide solution to the 10 cc ferric nitrate solution yields a dark blue precipitate.

Magical, isn't it, the way those liquids produced substances of different hues? That isn't exactly the way inks of ours are made, but it furnishes an idea of the first step in pigment or dry color production. Of course, to appreciate these changes requires a better sense of color value than that possessed by the train porter. A passenger on arising in the morning asked the porter, "Who shined my shoes?" The porter admitted he did. "One is brown and the other black," declared the passenger. To which the porter replied: "That's funny. A man who got off at Buffalo complained of the same thing."

One last point with respect to the acidity and alkalinity of the inks for offset-lith. Moisture is used to keep the non-printing areas free from ink in offset-lith printing. Damper rollers supply this moisture to the plate's surface by rolling over the plate just prior to the inking operation. The acidity of this damping solution may react with the ink, work its way up to the ink fountain, stripping rollers on the way. This failure of the ink to resist the water action might cause bleeding or running of the ink or its emulsification. Poor impressions with their dull, off-color appearance or streaky and ghost-like effects then result. In addition, it is the function of offset-lith inks to keep intact the greasy image on the press plate by supplying fatty acids to the image. Thus there is set up a continuous renewal of the image. Letterpress inks are not called upon to perform this task, and are therefore not so compounded.

All this sums up to one thought: Ink should be purchased to fill specific requirements. Ink works best when compounded to fit the three P's. Ink must be adjusted to conform with the *Process*, the *Paper*, and the *Purpose* of the final product.

Color Specifier Reissued

There is no doubt that the advertiser's interest in color is zooming, reports The Sigmund Ullman Company, Division of General Printing Ink Corporation, who issued what was considered a normal quantity of Color Specifiers less than two years ago. Normal distribution should take from three to four years. The Company reports that the demand for these specimen books exhausted the supply in quick time. So reprint has been published with an extra page of useful color information, legibility, harmonious and contrasting combinations. There are 42 colors on two stocks.

RESEARCH

THE FOUNDATION OF F. & L. LEADERSHIP

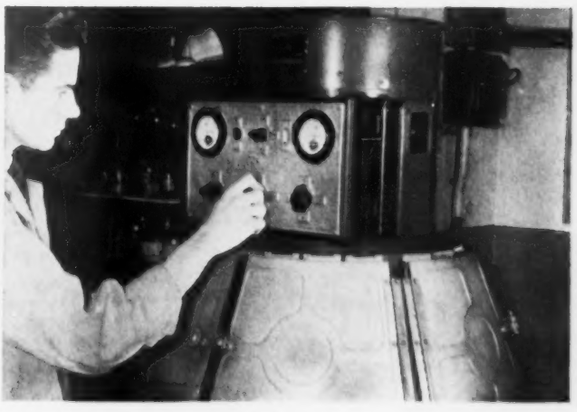
Take a quick pictorial trip through a portion of our Research Laboratory and you'll appreciate why Fuchs & Lang maintain their dominant position in the ink industry. No phase of scientific investigation is overlooked in producing the highest quality money can buy. Every step of manufacture —from an accurate match to its performance on your press, is taken into consideration. Research — the invisible but vital ingredient that insures perfect printing.

A preliminary experimental batch is weighed on finely balanced scales to determine the exact proportion required of each ingredient.

A partial view of a modern ink laboratory equipped with the latest scientific devices and testing apparatus.

All known raw materials are subjected to exhaustive laboratory tests by skilled ink technicians.

Microscopic examination of raw materials to determine suitability for modern ink formulation.



The Fadeometer. A testing device to check light fastness. This machine approximates in a short space of time the effect of sunlight.

The FUCHS & LANG MFG. CO. · 100 SIXTH AVE., NEW YORK

DIVISION · GENERAL PRINTING INK CORPORATION

Boston Chicago Cincinnati Cleveland Fort Worth Philadelphia St. Louis San Francisco Los Angeles Toronto

Platemaking Outfit

This illustration shows the ATF duplicate rubber plate-making department, including plate-making machine and work table and materials cabinet. The operator is measuring the floor depth of a plate with an ATF precision plate gauge. In the foreground on the work table is a rubber plate cutter and trimmer. Hanging on the side of the work table is a font of ⅜ in. steel bearers for foundry lock-up. Shown in the materials cabinet are the metal racks for holding rubber, holland cloth and sticky-back in rolls, the special shelves for matrix material, metal, finished plates, etc., the light-proof rubber storage drawer and the dusting drawer.

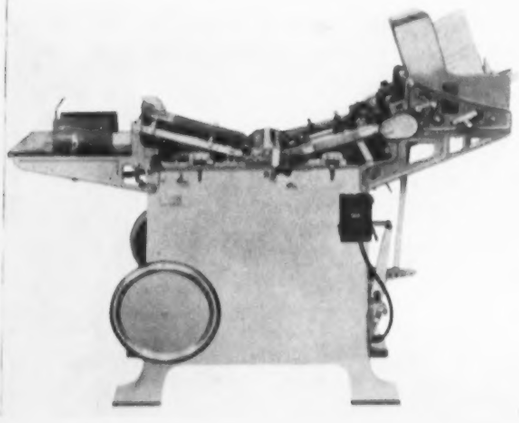
Envelope and Imprinting Press

B. Verner & Company announce the Model F Multipress which is intended for use in printing envelopes and for imprinting work. Standard type and flat electros are employed for the printing element, curved plates not being required.

The new Model F Multipress differs from the Model C in the full size make-ready cylinder which can be furnished with or without a cork impression blanket. Manufacturer states accurate register may be obtained at a speed of 6500 impressions per hour.

Ink distribution has been increased by the addition of vibrators on the form rollers. A long fountain has been added. Press is equipped with Knudsen Continuous Feeder which makes possible continuous production without lost time in reloading.

View of Verner Model F Multipress for printing envelopes and for imprint work.



BOOKS
RECEIVED

Knox Issues Guide To Copy Fitting

FRANK M. KNOX CO., Inc., New York, has published a Standard Guide To Copy Fitting. The Guide has been published as a section of the Knox Standard Guide to Planned Printing and is intended for use in solving problems arising when typewritten copy must be fitted into type layouts for any kind of printed matter. A total of 870 type faces from 6 pt. to 18 pt. have been analyzed on a square inch basis.

The Guide consists of a series of four tables in which all of the totals are set down for reference without computation of any kind by the user.

Table A gives the number of characters in lines of typewritten copy from 68 to 85 lines in both Elite and Pica typewriter copy.

Table B gives the area required for copy ranging from 1 sq. in. to 8⅛ sq. in. Irrespective of the regularity of the shape, the user measures the areas and the table gives the answer.

Table C gives the names of 870 type faces and the names of the manufacturers. It gives the number of type characters per sq. in. from 6 pt. to 18 pt., in solid, 1, 2, 3 and 4 pts. leaded.

Table D tells how much space to allow for lines of display type to be set with or in the body type. It also tells how many lines of type, in any point size and any line spacing, will go into a given number of inches.

Mr. Knox states this copy-fitting system has been prepared especially for use by the average copy-writer or advertising man who is not too familiar with pica and point measurements.

Junior Autoplates Safety Stop

NEW ORLEANS (Louisiana) *Times-Picayune's* Stereotype Superintendent Floyd Elrod reports the installation of a safety stop on his paper's Junior Autoplates. The purpose of the stop is to prevent starting the cylinder clutch when the casting box is closed. If the clutch were to be set in motion when the box is closed, the side sticks would be damaged. As shown in the accompanying illustration, the stop is made from ⅜ in. by 1 in. cold rolled steel, suitably shaped so that its upper end prevents shifting the clutch lever so long as the box is closed. The stop is fastened to the top of the stationary part of the box.

Change of Address

The Precision Finishing Machine Corporation has recently moved from 372 DeKalb Ave., Brooklyn, N. Y. to 122 E. 25th St., New York, N. Y. Firm is manufacturer of a Silk Screen Printing Machine.

Printing Plates Research, Inc.

As was announced in last month's issue of *Printing Equipment Engineer*, the first stockholders meeting of Printing Plates Research, Inc., was held in Columbus, O., on Tuesday, January 14 to complete arrangements for a research program and to approve the code of regulations of the Corporation.

A contract for a three-year period of study was signed with Battelle Memorial Institute, Columbus, Ohio. Research work for the newly incorporated group will be under the direct supervision of Dr. Bruce W. Gonzer. While it is within the scope of the organization to investigate all phases of printing plate making, for the present activities will be confined to the mechanics of the electrotype casting process, tinfoil, solder fluxes, tinning and any other factors influencing the adhesion of electrotype metal to shells.

Following are the officers and Board Members elected to serve for three-year terms each: President, Frank W. Kreber of Van Bolt-Kreber Co., Columbus, O.; First Vice President, Joseph Schwartz of Westcott & Thomson, Inc., Philadelphia; Second Vice President, Hubert Lehr, of Dayton (O.) Electrotype Co.; Secretary-Treasurer, J. Homer Winkler of Ace Electrotype Co., Cleveland. Trustees are George Scott of New England Electrotype Co., Boston; H. G. Schwarz of Art Electrotype Co., Cleveland, and Dennis Hoynes of Central Electrotype Co., Cleveland. Entire Board of Trustees (including officers) serves for three years.

Correction

In the Synthetic Resin-Like Plate Making Index, page 128 of the Where-To-Buy Printing Equipment and Supplies Catalog, the source of supply for Koroseal was attributed to Goodyear Tire & Rubber Co. The company supplying this material is The B. F. Goodrich Co. Kindly make the correction in your copy of the Catalog.

Closeup of individual fluorescent lighting fixture mounted over an assembly cabinet in composing room of Tampa (Fla.) Morning Tribune. *There is abundant light for the worktop.*

I Need

Rollers that will perform with equal efficiency on a wide variety of jobs. They must reproduce heavy solids or delicate tints with equal results . . . the best. Pressmen, in their stride, have found that Mercury Rollers are just right.

I Want

a Lithographic Blanket that combines great tensile strength with safe minimum stretch. It must have a surface as smooth as silk but durable enough to perform economically over a long period. I've found that Mercury Blankets meet all requirements — and they eliminate the need of powdering, so that working quarters are kept neater.

I Demand

that every bit of equipment in our plant is capable of turning out the highest quality work. That is why I use Mercury Rollers and Blankets. To do really fine printing you must have fine Rollers and Blankets.

Mercury Products
FILL THE BILL!

HARD-TO-PLEASE pressmen are our specialty. The man who knows what he wants in a Blanket or Roller and insists on getting it is the man for whom Mercury products are built. They are reliable, consistently efficient, engineered to produce good results under every pressroom condition.

RAPID ROLLER COMPANY

D. M. RAPPORT, Pres. Federal at 26th Street, CHICAGO

Neal Dow Becker (right), president, smiles approval as Miss Laura K. Wilkens pins emblem on Treasurer Grube upon his initiation into Intertype's Quarter Century Club.

Intertype's ¼ Century Club

Neal Dow Becker, president of Intertype Corporation, tendered a dinner to his Company's Quarter Century Club recently at Hotel Bossert in Brooklyn. Eight new members were added to the club roster this year, bringing the total active enrollment to 52 members, each of whom has served Intertype for 25 years or more. Each new member was decorated by the president with an emblem symbolic of 25 years of service. In addition, each was presented with a sum of money.

The new members admitted this year were: Treasurer Grube, Thomas H. McLaughlin, Frank Felter, Lester Hubbard, Mrs. Elsie Enright, Robert L. Alexander, Louis Biesterfeld and Edward A. Ullrich. Mr. Ullrich received his decoration the night previous to the dinner having been confined to bed at the time.

Making the Most of Rubber Plates

ONE is forced to admit that the use of color in direct mail advertising is increasing by leaps and bounds. It is seldom that we see a price list, broadside or catalogue in single color today. Colors are used largely in large masses such as backgrounds and wide borders. Some printers are getting a goodly share of this work by utilizing rubber plates which, except in fine screens and lines, possess advantages which make them preferable to metal plates.

As rubber plates are less costly it is easier to sell the color work. Less make-ready is required when printing from rubber, less ink is needed to cover, there is less trouble from offset and sticking. Rubber plates are well adapted to printing on the papers most used in direct mail advertising when printed by letterpress and have the further advantage of printing well on the cheaper-than-enamel coated papers so much used when printing by the offset process. Since rubber plate executed work is easier to sell, less troublesome in production and just as satisfactory in other respects such as the appearance of the print and resistance to wear, it is, indeed, surprising that more printers do not make wider use of rubber plates.

Suitable inks for use on rubber plates are now available from the leading ink makers. One caution must be observed: The first impression from a rubber plate must be very light lest the plate be ruined by the squeeze. This applies not only to new plates but also used ones, possibly from another plant. The type-high gauge test is the first order of business when about to print from a rubber plate. A novice with rubber may have placed too much interlay or underlay beneath the rubber and the first impression afterward may ruin the plate. The overlays should be of thin tissue as rubber responds to slight pressure. As less ink is required to cover, the rubber plate prints solids very nicely without mottle and streaks if the correct ink is used.

Those printers who have given rubber plates a fair trial could not be induced to go back to metal plates except for the few purposes for which metal plates are necessary aside from fine screen halftones.

REPORT BLANK *for roll breaks furnishes pertinent information monthly*

By LESLIE J. GRINER*

*Mechanical Superintendent, Youngstown (O.) *Vindicator*.

IN OUR plant, we try to find ways and means for reducing production waste wherever it is possible to do so in a profitable manner. One of these is a monthly Roll Break Report blank devised by Pressroom Superintendent Earl Weiskittel, which has been used in the *Vindicator* plant for some time. The data entered upon the blank furnishes a running account of the number of roll breaks for the month by editions, number of rolls used, as well as other pertinent information. In our plant, we like to feel that we know what we are doing; we also like to determine the causes for things which should not, but do, happen. In this way, we are furnished information which enables us to either eliminate the trouble entirely or to minimize it.

The writer doesn't believe extended comment about the utility of this blank is necessary. It is interesting, though, to have as nearly factual evidence as it is possible to secure about the causes of roll breaks during the month and in what proportion they occur to the number of rolls used.

Reduced-size reproduction of newsprint Roll Break Report, as used in plant of Youngstown (O.) Vindicator. The original size is 8½ in. by 11 in. This reproduction is for the month of September 1940 and shows there were a total of 15 web breaks and that 554 rolls were used. These figures show that there were 36.95 roll changes per break, or expressing it another way, there was one break for approximately every 37 rolls.

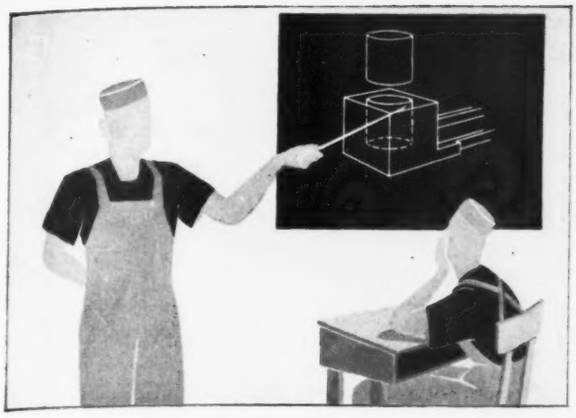
ROLL BREAK REPORT FOR MONTH OF Sept 1940

Date	Pages	Sections	Units	Color	Early News	Main	Trum	City	Sports	Rolls Used	Paper	REMARKS
1	32	10-6-8-8	4							20	St L	
2	18	10-8	3							11-31	"	
3	22	12-10	3							11-42	"	
4	24	14-10	3							15-57	"	
5	46	16-(10)-8-12	5+4	X			1		1	33-90	"	Breaks - new rolls
6	38	16-8-14	5							20-110	"	
7	16	8-8	2				1	1		8-118	"	Trum. - Forma break; City - no evidence
8	42	12-10-12-8	6							29-147	"	
25	26	16-10								17-450	"	
25	24	14-10								15-465	"	
26	34	14-8-12						2		20-485	"	New roll and no evidence
27	36	14-8-14						1		22-507	"	New roll
28	16	8-8								10-517	"	
29	44	14-10-12-8								26-543	"	
30	22	10-12								11-554	"	
31												

° Sec.

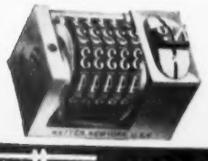
X - Yellow - blue - brown

15 breaks; 554 rolls; 36.95 roll changes per break; 1 break for every 37 rolls



THE KID LEARNS MORE ABOUT *Numbering for Profit*

- "There is only one sure cure for plunger-wobble."
  - ★ "Didja say SURE cure?"
- "I did. Look, listen and learn. An oval plunger snugly supported on all sides can't wobble. It has no sharp corners or small faces to wear off. Wear means wobble. Least wear, least wobble. An even pressure all over a big area means least wear. Get it?"
  - ★ "Yeah, but how about the hole the plunger works in?"
- "Kid, you're learning fast. Look again. This hole is cut out of the solid steel frame. The steel of the frame is all around it. There's nothing fastened to the frame to hold the plunger in."
  - ★ "Is that good?"
- "Now you're slipping. You ought to know it's good. Anything fastened on can get loose. This plunger is surrounded by a solid, jointless, cornerless wall of steel—like a piston in a cylinder."
  - ★ "Who makes 'em like that?"
- "Wetter, the same outfit I told you about in your first lesson."
  - ★ "Must cost more to make 'em like that."
- "Sure, but the customers—that's us—save money."
  - ★ "How come?"
- "Plunger-wobble smudges impressions and wears out machines before their time. We number better with Wetter and keep our machines so long we forget the price."
  - ★ "Pretty good, huh?"
- "You bet!"



WETTER NUMBERING MACHINE CO.
ATLANTIC AVE. & LOGAN ST., BROOKLYN, N. Y.
Sold by all dealers and branches
AMERICAN TYPE FOUNDERS

1027

ZINK CUT CEMENT PRICES in the United States: 75c per large tube; $6.00 per dozen tubes; $5.00 per dozen tubes in gross lots.

Booth's Zink Cut Cement

not only holds any kind of cut to wood or metal base in the position (angular or straight) as indicated in the layout, but it also permits removal of the cut from its base when a form is to be broken up. Removal of cuts is a simple matter—a screwdriver with sharpened bit will do.

Foreign Distributors
SEARS, LTD.
Toronto, Montreal, Winnipeg, Vancouver, Canada
JUNGER & JUNGER
Goteborg, Sweden

THE E. A. BOOTH RUBBER COMPANY
364 ROCKEFELLER BUILDING • CLEVELAND, OHIO

THE photo-engraving industry uses zinc and copper — basic war materials — which are currently in great demand for this nation's rearmament program and its aid to Britain policy. Edes has adequate supply for the current needs of its customers and is maintaining its usual high standard in all alloys — REGULAR ZINC, HARD MATRIX ZINC, TRIPLEMETAL, COPPER and BRASS.

Experience, gained in the last war, proved that scrap metal makes unsatisfactory engraver's sheets. Although Edes does not use and does not buy scrap, we advise all engravers to get full value for their scrap zinc which was being sold for as high as eight cents a pound in some cities in December.

In serving an industry prepared to play an important part in the National Defense Program on the propaganda front . . . Edes recognizes a definite duty. It is to provide engravers with material that makes for greater efficiency . . . less waste of time and metal. Through the current emergency, we will continue to strive toward that end.

EDES PLYMOUTH BRAND BRASS

THE EDES MANUFACTURING CO.

PLYMOUTH, MASS., U. S. A.

AUTHORIZED REPRESENTATIVES

CHICAGO: Chemco Photoproducts Co.
NEW ORLEANS: Chemco Photoproducts Co.
ST. LOUIS: Mid-West Photo-Eng. Supply Co.
WASHINGTON, D. C.: E. H. Walker Supply Co.
RICHMOND, VA.: E. H. Walker Supply Co.
BOSTON: Allan B. Croke Co.
BUFFALO: C. S. Illingworth
DETROIT: Eaton-Clark Co.
CINCINNATI: G. C. Dom Supply Co.
AKRON: Metzger Photo Supply Co.
SAN FRANCISCO: J. W. Feinstein
ATLANTA: Chemco Photoproducts Co.

DENVER MINNEAPOLIS TULSA WICHITA MEMPHIS
DALLAS OMAHA KANSAS CITY SAN ANTONIO
OKLAHOMA CITY DES MOINES HOUSTON
Thompson-Hayward Chemical Co.

EXECUTIVE ¶s

Charles Linder Mohr, 72, passed away at St. Francis Hospital, Evanston, Ill., January 14. He is survived by his wife, Evelyn Oliver Mohr; one son, Harold O.; four sisters, Emma V. McBroom, of Alhambra, California, Mrs. Louis C. Schmidt of Naperville, Illinois, Mrs. E. Harry Jones of Joliet, Illinois, and Mrs. Elizabeth M. Godfrey of Chicago; and one brother, Arthur J. Mohr of La-Grange, Illinois. While with the Janesville (Wis.) *Recorder*, in 1910, Mr. Mohr conceived the idea of an automatic device, to be attached to Linotype and Intertype machines, for sawing slugs to the many lengths needed in newspaper and job work. There followed a half dozen years of experimental work, disappointments, minor triumphs, all in spare time, to perfect the original idea. About the time the United States entered the first world war, a number of important companies adopted the Mohr Lino-Saw. To manufacture and market the product, Mr. Mohr founded the Mohr Lino-Saw Company and was its active head for many years. This invention, as expressed by his associates, is his monument.

Frank J. Schmidt, president and general manager of the E. C. Kropp Co., Milwaukee, Wis., manufacturers of postcards, started his 41st year of active work with this firm in January. At a company party, celebrating the opening of larger quarters, the employees presented Mr. Schmidt with a gift of their esteem — a desk and chair for his office.

Joseph F. Holmes is now superintendent of Wright & Potter Printing Co., Boston, having succeeded J. Mullin who has retired. Mr. Holmes is a member of the Boston Craftsmen's Club.

Arthur J. Wilson was appointed chief composing room machinist of the Washington *Star* recently by Composing Room Foreman C. P. Merkle. Mr. Wilson, who is 44 years of age, has been with the *Star* for 20 years, coming to that place from the Government Printing Office. He had worked under Messrs. Alex Gordon and Wm. T. Henderson, both now deceased.

Mechanical Superintendent William Brown of the Minneapolis (Minn.) *Star-Journal*, announces the appointment of George Allen as pressroom foreman, succeeding Walter Carney, resigned.

Mechanical Superintendent George Fouts of the Council Bluffs (Ia.) *Nonpareil*, who has been indisposed for several weeks, has so far recovered that he is able to attend to his duties on a part time basis and expects to be fully recovered shortly.

This month the Detroit Club of Printing House Craftsmen celebrates its 20th anniversary with three of the charter members still active. These are George Glaeser, club secretary for 20 years; Past President Griffin Sawyer, and Club Historian John A. Stryker. The celebration will be in the form of a dinner dance in the Leland Hotel's Colonial Room on February 22. Guests will be Past International President Perry Long of *American Weekly*, International President Frank McCaffrey and the International Board of Governors. The semi-annual international board meeting is being held in Detroit at that time.

Bernard P. Sass, of Detroit Typesetting Company, has been re-elected President of the Detroit Club of Printing House Craftsmen. Other officers of the Club who were elected for 1941 are Lawrence Speck, 1st Vice President; John J. Barnett, 2nd Vice President and John G. Fisher, Treasurer. George Glaeser was re-elected secretary for the 21st consecutive year. Those elected as directors were Past President Griffin Sawyer, George Hofsommer, Reginald Stranbridge, George Lorentzen and Starr Wade.

Timken Personnel Changes

Sales Engineer M. C. Bellamy has been made District Manager of Industrial Bearing and Steel Sales for The Timken Roller Bearing Company's Seattle territory.

The Timken Company is represented on the Pacific coast with the Los Angeles and San Francisco territory covered by S. T. Salvage.

Both Mr. Salvage and Mr. Bellamy work directly under R. A. Sanguinetti, Western Division Manager, at 1800 Van Ness Avenue, San Francisco.

Mr. Mechanical Executive

DO YOU THINK FREQUENTLY ABOUT MAT QUESTIONS?

We hope not . . . Dry mats are noticed and discussed most when there is something wrong with a newspaper's production . . . The mat you rarely hear about or think about is the mat that is giving uniform satisfaction.

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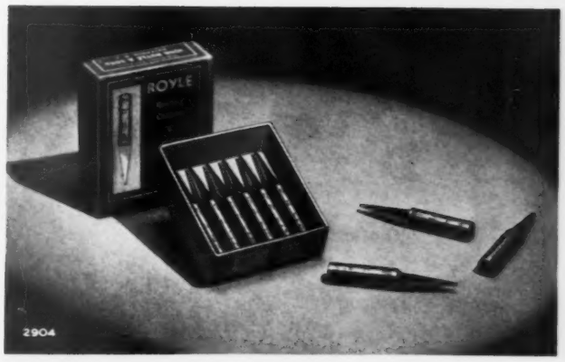

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Choose Style According to Use

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C		Brass
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F		Zinc (Reinforced blade)
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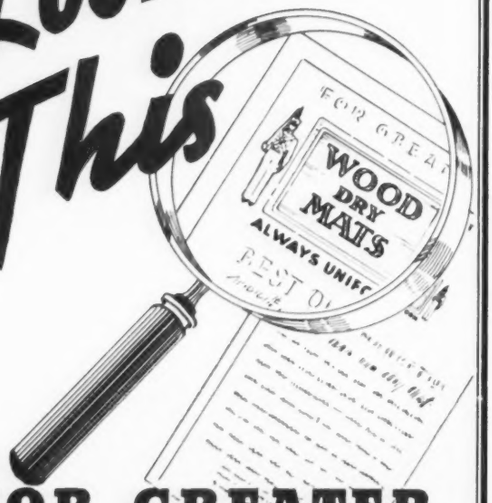

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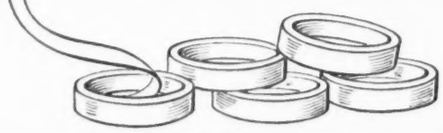

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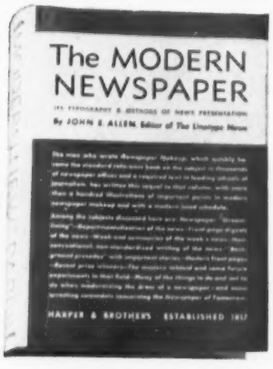

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PRINTING PATENTS REPORT

Covering Patents Issued
December 31, January 7, January 14, and January 21.

This data is compiled exclusively for *Printing Equipment Engineer* by Invention, Inc., is verified in the United States Patent Office, and is comprehensive of all patents in the field of each heading continuous from the last published issue of this magazine.

For copies of patents listed here, specify the patent numbers and send 10c each (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforating:

2,227,213. BOOKBINDING APPARATUS, for amateur use, comprising a complete unit in that all the ordinary processes and operations of bookbinding and book repairing such as drilling, side stitching, saddle stitching, backing, trimming, etc., can be carried out with the one unit. Invented by Milton Berlanstein, Brooklyn, N. Y. Unassigned. Application May 20, 1939. 14 claims.

2,227,320. BOOK constructed with space for appending periodically published pamphlets. The invention proposes the inclusion in the book of a set of dummy pages which may be torn out as desired to make space for the pamphlets. Invented by Russell A. Rasco, Coral Gables, Fla. One-half assigned to Fred O. Dennis, Buffalo, N. Y. Application August 4, 1939. 4 claims.

Composing Room Equipment:

2,227,612. METHOD AND APPARATUS FOR PHOTOGRAPHICALLY COMPOSING TEXT MATTER in which previously composed, photographable lines of typographic characters are presented in longitudinal sequence at an exposure locus, and are photographed upon a page-size light-sensitive surface, a line at a time, so that the matter is light-impressed in line and page formation on the light-sensitive surface, which may be developed and the negative used in making page-form printing designs. Invented by George Westover, Balcombe, England Unassigned. Application April 26, 1938. 16 claims.

2,227,935. PHOTOCOMPOSING MACHINE having a coupling mechanism which is capable of being positioned by resting the attachment upon a platform located on the machine and then by a combined motion of pushing and turning, accomplishing the coupling together of the elements in fixed relation, the accuracy of positioning being accomplished by automatic means. Invented by Maurits C. Indahl, Rydal, Pa. Assigned to Lanston Monotype Machine Co., 24th and Locust Sts., Philadelphia, Pa. Application August 19, 1939. 11 claims.

2,228,810. MATRIX SETTING AND TYPE-LINE CASTING MACHINE provided with electromagnetically actuated tripping devices, providing an improved type of releasing key with which it is possible to employ cam control for the key mechanism. Invented by Kurt Bendorff, Berlin, Germany. Assigned to Firm Typograph G. m. b. H., Berlin, Germany. Application August 14, 1939. 3 claims.

2,228,085. PRINTING MACHINE in which the set type indicator is actuated by and in accordance with movements of the main shaft, while the spacing indicator, actuated with each movement of the setting bar, is normally inoperative to indicate the setting of the justifying mechanism of a type carrying member, but may be manually connected with the main shaft through the hand wheel, so that the actuating means of this indicator may be actuated by a coupling member adapted to be connected with the hand wheel by one hand of the operator. Invented by Blackwell K. Murchison, Brooklyn, N. Y. Assigned to Maotalign Corp., New York, N. Y. Application February 3, 1939. 21 claims.

2,228,952. TYPE LINE TRIMMING MACHINE wherein stationary knives are so arranged relative to one another that one of the knives removes the burr positioned laterally on the top of the plain face of the line, another acts on the base of the line to insure uniform height and a third knife cuts the ribbed line face parallel to the bearing surface exactly to the typographic measure. Invented by Paul Fluger, Hamburg, Wandsbeck, Germany. Unassigned. Application July 7, 1939. 6 claims.

2,228,982. TYPOGRAPHIC COMPOSING MACHINE so designed that manual connection of the keyboard to either the 72- or 90-character font will effect simultaneously a corresponding adjustment to assure direction of the matrices to the 72- or 90-character distributor. Invented by George W. Allan, Brooklyn, N. Y. Assigned to Intertype Corp., 360 Furman St., Brooklyn, N. Y. Application December 30, 1939. 16 claims.

2,229,027. METHOD AND APPARATUS FOR TYPOGRAPHICAL CASTING wherein different portions of the cast body are progressively cooled and the units of the mold adjacent these portions are progressively opened. Also claimed is the step of subjecting the casting to additional or increasing pressure during cooling. Invented by James E. Parker, Washington, D. C. Unassigned. Application March 2, 1938. 12 claims.

Feeding, Folding, Delivery:

2,226,674. SHEET DELIVERY MECHANISM for transferring freshly printed sheets from the impression cylinder of a press to a delivery platform where the sheets are piled. The invention is specifically concerned with control of the conveyor speed so that the sheets are deposited very gently on the delivery platform. Invented by Frederick W. Seybold, Elizabeth, N. J. Assigned to American Type Founders, Inc., Elizabeth, N. J. Application September 1, 1939. 1 claim.

2,226,957. SHEET FEEDING APPARATUS providing an improved sheet calipering for feeders which eliminates separate timing and operating means and is associated with and timed by side registering mechanism. Invented by Edward J. Yeo, Pearl River, N. Y. Assigned to Dexter Folder Co., North Pearl River, N. Y. Application November 3, 1939. 20 claims.

2,227,370. CHAIN GRIPPER FEEDER for successive feeding of individual sheets from a pile of sheets to a printing press. The device comprises an endless conveyor element having spaced sheet grippers attached thereto, a circular guide about which the conveyor element passes, and a suction gripper revoluble about the axis of the guide for gripping the uppermost sheet of a pile and moving it toward a sheet gripper on the conveyor element. Invented by Frederick W. Seybold, Elizabeth, N. J. Assigned to American Type Founders, Inc., Elizabeth, N. J. Application May 24, 1939. 15 claims.

2,228,913. MECHANISM FOR FEEDING METAL SHEETS and side registering the sheets with respect to a printing press, etc. The invention provides an improved mechanism for side registering sheets through magnetic gripping action applied in such a manner as to move the sheets sidewise while they are being advanced to the printing machine. Invented by George A. Martin, Pearl River, N. Y. Assigned to Dexter Folder Company, North Pearl River, N. Y. Application November 13, 1939. 5 claims.

(*Continued Next Page*)

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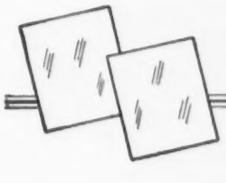

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Kalamazoo, Michigan
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Harman C. Crocker
January 13, 1941
Hammond Machinery Builders, Inc.
Kalamazoo, Michigan
Gentlemen:
In reply to your letter of December 30, we have had one of your Glider Trimsaws for about three years, and have found it for better work, as good as represented.
Most of our work is straight cut-off and mitering, and we find its performance is far better than any other saw we have used in our plant.
I believe we were the second plant in Maine to install your Glider; consequently, many printers would come in to look it over.
We are entirely satisfied with the saw and are very glad to recommend it.
Sincerely yours,
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2,229,487. SHEET COLLECTING AND FOLDING MECHANISM FOR PRINTING PRESSES which will operate to handle either shorter or longer sheets. The device includes means for severing and positioning either the shorter or longer sheets. Invented by Howard M. Barber, Pawcatuck, Conn. Assigned to C. B. Cottrell & Sons Co., Westerly, R. I. Application February 28, 1940. 20 claims.

Miscellaneous:

2,226,848. FLASH-DRYING INK, particularly for printing on non-fibrous organic pellicles of the sausage tubing type, comprising a film-forming base from the group of drying oils and synthetic resins, a flash-drying vehicle for the ink, and a hard resin to give a non-tacky deposit upon evaporation of the vehicle. Invented by R. T. K. Cornwell, Fredericksburg, Va. Assigned to Sylvania Industrial Corp., Fredericksburg, Va. Application January 7, 1939. 15 claims.

2,226,867. COMPOSITION FOR DULL RAISED PRINTING wherein resin, gum, shellac or the like are bonded with a chemical which, with fusion of the resin, etc., will so blend therewith as to give dull rounded out letters. The gloss retarding agent employed is a heavy metal soap such as zinc stearate. Invented by Samuel Lipsius, New York, N. Y. Unassigned. Application August 11, 1939. 6 claims.

2,227,102. DRYING OIL OR SEMI-DRYING OIL COMPOSITIONS such as paints, printing inks, etc., characterized by containing chlorinated rubber. Invented by Arloe R. Olsen, Wilmington, Del. Assigned to Hercules Powder Co., 908 Market St., Wilmington, Del. Application November 1, 1937. 4 claims.

2,227,720. COMPOSITION FOR PREPARING ALUMINUM FOIL TO RECEIVE PRINTING INK, comprising an etching agent, a plasticiser, and a resinous material which traps the etching agent from the foil and ink when dry, and a solvent. Invented by Ernest L. Kallander and J. F. Thompson, Framingham, Mass. Assigned to Dennison Mfg. Co., Framingham, Mass. Application January 31, 1939. 6 claims.

2,227,962. PAPER CUTTING MACHINE controlled by a novel two-handed safety fluid operated control, the machine being of the type wherein the paper stack is clamped during the cutting operation by a fluid-operated clamp mechanism functioning in timed relation with the cutting stroke of the knife. Invented by Haywood G. Dewey and Edward P. Flynn, Rochester, N. Y. Assigned to Eastman Kodak Co., 344 State St., Rochester, N. Y. Application August 31, 1939. 25 claims.

2,228,033. "SYMPATHETIC" RAPID DRYING PRINTING INK, normally invisible after drying but capable of becoming visible when the printed material is wetted with a solution. Invented by T. A. Martone, Wilmington, Del. Assigned to E. I. du Pont de Nemours & Co., Wilmington, Del. Application January 6, 1938. 3 claims.

2,228,553. SAFETY GUARD FOR PAPER CUTTERS characterized by provision of a device for blocking the space between the guide members below the knife and knife bar to prevent the operator from putting his hand in the opening, or for preventing scrap strips of paper from entering the opening. Invented by Freeman Barney, Spring Lake, Mich. Assigned to Challenge Machy. Co., Grand Haven, Mich. Application October 21, 1940. 6 claims.

2,229,511. BASIC ZINC NAPHTHENATE DRIER for paints, varnishes and printing inks, produced by heating more than a normal combining equivalent of a zinc compound and petroleum naphtha and naphthenic acid. Invented by Kenneth E. Long, South Euclid, Ohio. Assigned to Harshaw Chemical Co., Elyria, Ohio. Application April 14, 1934. Divided and new application March 16, 1939. 6 claims.

PLATE MAKING:

2,226,987. METHOD FOR REPRODUCING IMPRESSIONS in a definite relation to each other, characterized by taking a series of impressions step by step from a single negative or image which has its position changed with respect to the receiving sheet or film after each cycle. Invented by William D. Wiegand, Towson, Md. Unassigned. Application October 7, 1937. 4 claims.

2,227,139. PRINTING PLATE comprising a cement-asbestos welded base and a printing surface of English clay and Paris white bound with glue. The plate is claimed to be capable of making up to 400,000 impressions. Invented by John W. Kelly and Daniel J. Kelly, Leominster, Mass. Assigned to Activated Process Corp., Leominster, Mass. Application October 18, 1937. 4 claims.

2,228,280. METHOD FOR SHADING SURFACES in the preparation of drawings for reproduction in publications. The method employs a thin sheet of Cellophane carrying comparatively dry areas or patterns of transferable shading material, the shading material being transferred to the drawing by superimposing the Cellophane sheets with the drawing and applying pressure. Invented by Theodore L. Maddock, Cleveland, Ohio. Assigned to Fine Art Mfg. Co. Cleveland, Ohio. Application April 26, 1938. 7 claims.

2,228,281. TRANSFERABLE SHADING COMPOSITION (for use in the method described in Patent No. 2,228,280) comprising a composition of four parts ester gum, eight parts of linseed varnish, four parts of carbon black and one part of carnauba wax of a consistency enabling it to adhere to a sheet of transparent material of the group containing Cellophane and cellulose acetate, and be transferable therefrom at ordinary temperature by pressure on the back of the sheet. Invented by Theodore L. Maddock, Cleveland, Ohio. Assigned to Fine Art Mfg. Co., Cleveland, Ohio. Application November 23, 1938. 2 claims.

2,229,014. PROCESS OF PRODUCING ETCHED PRINTING SURFACES by photomechanical methods for printing on textiles and the like, which comprises creating a positive having an opaque image of a design element on a transparent member, positioning the positive in contact with a light sensitive member, exposing the light sensitive member to the action of light projected through the positive only, creating a marginally reduced negative of the design element by producing a relative shifting movement in a circular path between the positive and the light sensitive member. Invented by Owen R. Huggins, South Norwalk, Conn. Assigned to Linotone Corp., Corp. of N. Y. Application March 3, 1938. 22 claims.

2,229,457. PRODUCTION OF ELECTROTYPES by molding an impression on a flat case, concavely curving the molded case and electroplating the curved case to form a thin electrotype shell, backing up the shell with a flat soft metal backing, and curving the composite structure in the opposite direction to conform to the contour of a printing cylinder and to expand the surface of the electrotype to correspond to the original molded impression. Invented by Handley Kimball, Cincinnati, Ohio. Assigned to Quality Engraving & Electrotype Co., 436 Commercial Sq., Cincinnati, Ohio. Application January 5, 1939. 2 claims.

Printing Presses and Supplies:

2,226,642. MERCURY FEEDING DEVICE FOR mercury printing processes wherein the non-printing areas of a planographic plate are coated with a film of mercury. The invention is concerned with a novel roller system for subdividing the mercury. Arlington W. Stephenson, Los Angeles, Calif. Assigned to Lensart, Inc., San Francisco, Calif. Application May 29, 1939. 10 claims.

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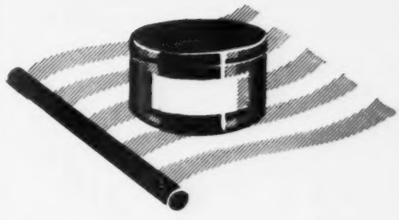

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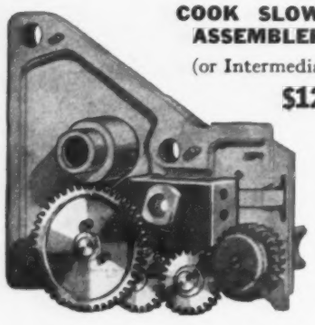

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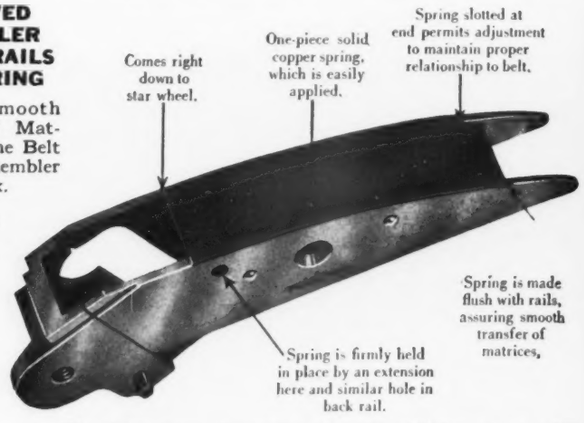
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Spring slotted at end permits adjustment to maintain proper relationship to belt.
Spring is made flush with rails, assuring smooth transfer of matrices.
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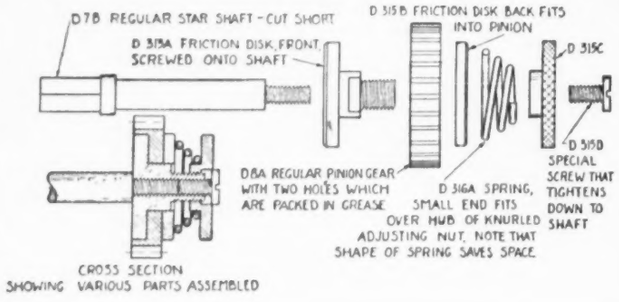
ADJUSTABLE STAR WHEEL FRICTION
Permits Quick, Easy Adjustment of Star Wheel Friction Spring. **$2.15**


D7B REGULAR STAR SHAFT - CUT SHORT
D 315A FRICTION DISK FRONT SCREWED ONTO SHAFT
D 315B FRICTION DISK BACK FITS INTO PINION
D 315C
D 315D SPECIAL SCREW THAT TIGHTENS DOWN TO SHAFT
D8A REGULAR PINION GEAR WITH TWO HOLES WHICH ARE PACKED IN GREASE
D 316A SPRING, SMALL END FITS OVER HUB OF KNURLED ADJUSTING NUT, NOTE THAT SHAPE OF SPRING SAVES SPACE.
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2,226,871. APPARATUS FOR DRYING PRINTING INKS, SHEETS, WEBS, ETC., employing either an electrostatic field, an electromagnetic, or a radio field to effect drying. Invented by Harold I. Nicholas, Chicago, Ill. Assigned to W. F. Hall Printing Co., 4600 W. Diversey Ave., Chicago, Ill. Application April 9, 1938. 1 claim.

2,226,888. PRINTING MACHINE for printing forms or designs on one or more sheets, strips or webs of paper whereby the sheets or strips, when printed in multiple, will be placed in superposed relation and the impressions made upon the webs will be in registering relation. Invented by Clayton E. Wyrick, Wyandotte, Mich. Unassigned. Application October 10, 1938. 2 claims.

2,227,616. NEWSPAPER PRINTING PRESS having means to protect the web, as it passes up through the press unit to the printing cylinders, from being soiled by the ink mist or by particles of ink or lubricant which might be thrown from the rollers when the press is operating at high speed. Invented by Otto R. Wolf, Oak Park, Ill. Assigned to Tribune Co., Chicago, Ill. Application June 6, 1938. 18 claims.

2,227,877. ROCKING BED WEB PRINTING PRESS in which the impression cylinder rises and falls in accordance with the variation in pitch of the bed during its rocking movements; the bed being flat, the cylinder maintains impression contact therewith during printing by dropping and rising in accordance with the changing distance between the point of impression contact and the pivot of the bed supporting member. Invented by Paul F. Cox, Los Angeles, Calif. Unassigned. Application September 26, 1939. 24 claims.

2,227,882. METHOD FOR OBTAINING A "SQUEEZE" IMPRESSION in letterpress, direct or relief printing. The method employs a printing plate having a letterpress printing surface requiring different printing pressures to obtain an even pressure, and resilient material interposed between the plate and the base so arranged relative to the base as to permit variation of the area of support of the plate. Invented by Philip A. Frazier, Oak Park, Ill. Unassigned. Application March 5, 1937. 5 claims.

2,227,900. VULCANIZED COMPOSITE ARTICLE comprising natural rubber and synthetic rubber-like material such as the reaction product of butadiene with methacrylonitrile, and a bond of synthetic rubber-like material made by polymerising butadiene in the presence of sodium wire. The invention is useful in the manufacture of printing rollers and the like. Invented by Bernard J. Habgood & Leslie B. Morgan, Manchester, England. Assigned to Imperial Chemical Industries Ltd., a Corporation of Great Britain. Application February 9, 1937. 12 claims.

2,228,030. WEB DRYING APPARATUS, particularly for drying printed Cellophane webs and the like, comprising two banks of drying nozzles arranged as legs of inverted V's, heater tubes arranged alongside of the banks, a pair of fans adjacent the tubes, and means for guiding the web to be dried in a path parallel to the banks of nozzles. Milton E. Hanson, Haddonfield, N. J. Assigned to B. F. Sturtevant Co., 37 Readville St., Boston, Mass. Application February 2, 1940. 7 claims.

2,228,807. COMBINED AUTOMATIC COLORING AND PRINTING MACHINE for applying coloring dyes or inks to the sheets or blanks of material used for making boxes or cartons, as well as for applying printed designs and other printed matter to the material. Invented by Charles H. Bacher, St. Joseph, Mo. Unassigned. Application May 11, 1937. 5 claims.

2,229,017. PRINTING PRESS WEB TREATING APPARATUS having operating means for progressively acting upon a lengthwise fed web, and means for causing relative movement between the web and operating means for placing the web in and out of presented relation to the operating means. Invented by Leroy Q. Presby, Melrose, Mass. Assigned to American Stay Co., 299 Marginal St., E. Boston, Mass. Application March 3, 1938. 22 claims.

2,229,067. HUMIDIFYING APPARATUS FOR INKING MECHANISMS of flat-bed or rotary printing presses, comprising a novel air pressure device for spraying water into the ink in the press immediately prior to application of ink to the printing surface. Invented by Philip A. Frazier, Oak Park, Ill. Unassigned. Application October 28, 1937. 4 claims.

2,229,133. ROTARY PRINTING APPARATUS using rubber plates, characterized by use of a grooved plate-receiving cylinder and an adhesive coating on the back of the plate, so that under rolling pressure the adhesive on the plate is forced into the grooves and thereby prevents slippage of the plate. Such arrangements are particularly advantageous in the printing of fanfold forms. Invented by Leo M. Sands, Norwalk, Ohio. Assigned to Rotary Printing Co., Norwalk, Ohio. Application December 27, 1938. 1 claim.

2,229,146. DRAWSHEET, for impression cylinders of rotary printing presses, comprising a fabric base made from regenerated cellulose threads of uniform denier, one side of the base being coated with a base coat of cellulose derivative and alkyd resin, an intermediate coat of a cellulose derivative, alkyd resin and pigment, and a surface coat of dull cellulose derivative, and the other side being coated with a slightly tacky plasticized resin. Invented by Raymond E. Thomas, Newburgh, N. Y. Assigned to E. I. du Pont de Nemours & Co., Wilmington, Del. Application September 6, 1939. 1 claim.

2,229,226. COMBINATION SURFACE AND INTAGLIO PRINTING PRESS which eliminates small gears and wherein all heads are released simultaneously by manually throwing a quick throwout lever. Invented by Harry A. Scott, N. Plainfield, and Lynn B. Case, New Brunswick, N. J. Assigned to John Waldron Corp., New Brunswick, N. J. Application October 26, 1937. 8 claims.

2,229,285. APPARATUS FOR DRYING INK on webs of the type used in printing newspapers, magazines, etc. Provides a system which effectively removes the insulating layer of volatiles from association with the web under treatment to thereby attain greater efficiency in drying while permitting the use of lower temperatures. Invented by Charles L. Gehnrich, Elmhurst, N. Y. Unassigned. Application March 13, 1939. 3 claims.

2,229,346. MULTI-COLOR PRINTING MACHINE for glass, cardboard, etc., which allows the work sheets to be charged and discharged from an intermittently rotatable printing table in properly timed relation with the printing mechanism so as to produce an economical and practical design on the sheets to be printed. Invented by Frederick Shurley, Windsor, Ontario, Canada. Assigned to Guthrie Ceramic Labelling & Machinery Co. Inc., Dover, Del. Application April 27, 1938. 11 claims.

2,229,347. REGISTERING DEVICE FOR MULTI-COLOR PRINTING of the type wherein the articles to be printed are rotated until they assume desired rotary position for commencement of the printing operation, and are then held stationary during passage from registering position to printing position. The device is particularly for printing on bottles and the like. Invented by Frederick Shurley, Windsor, Ontario, Canada. Assigned to Guthrie Ceramic Labelling & Machinery Co., Inc., Dover, Del. Application February 14, 1939. 13 Claims.

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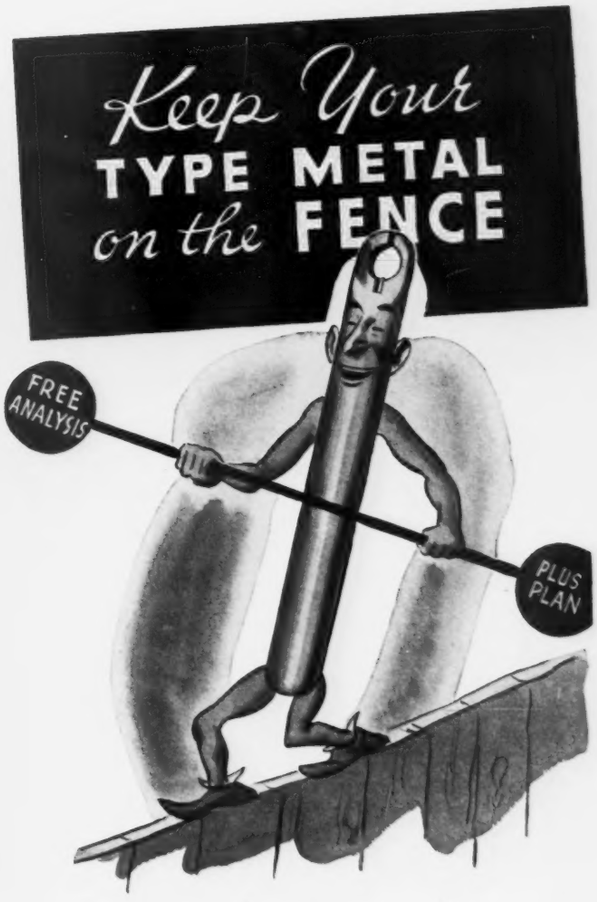

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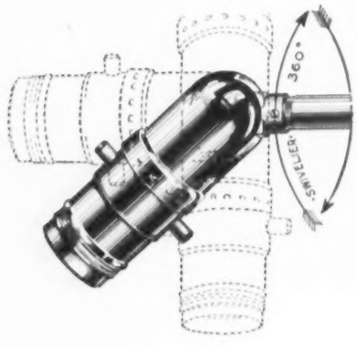
Swivelier Adjustable Socket

Reliance Devices Company announces the Swivelier localized lighting lamp socket which has been approved by the Underwriters' Laboratories. Construction of the device is such that the socket is adjustable to full 90 deg. angle and can be rotated to 360 deg. circle when adjusted at any angle. Manufacturer states the unit will "stay put" in any position and machine vibrations will not cause the swivel to work loose. A spring compensates for wear due to friction. Swiveliers are wired the same as standard sockets. Are furnished in push-through, pull chain, keyless, turn-knob and 3-way types. Threads on the shell permit attachment of any style shade.



Swivelier Lamp Socket is adjustable to full 90 deg. (right angle) and can be rotated to describe 360 deg. circle when adjusted at any angle.

ATF Honor Club

American Type Founders has just established the ATF Honor Club, an organization to which branch managers and salesmen are eligible. Membership, announces Vice President Frederick B. Heitkamp, will be composed of those who demonstrate "their responsibility to customers, company and management and properly represent ATF products to the end that all benefit and prosper."

Here is shown design of solid gold emblem provided for members of ATF's Honor Club. Branch Managers and Sales Representatives are eligible for membership.

A solid gold emblem in the form of a miniature chase into which has been locked the *ATF* insignia together with the designation "Honor Club" shown in reverse, has been selected. For each year thereafter, up to five years, in which membership in the Club is attained, a precious stone will be added to the emblem.

Now in New Plant

Officials of Amthor Testing Instrument Co., Inc., announce the purchase of a two-story factory building at 45-53 Van Sinderen Ave., Brooklyn, New York. Purchase of the building was necessitated by greater volume of business.

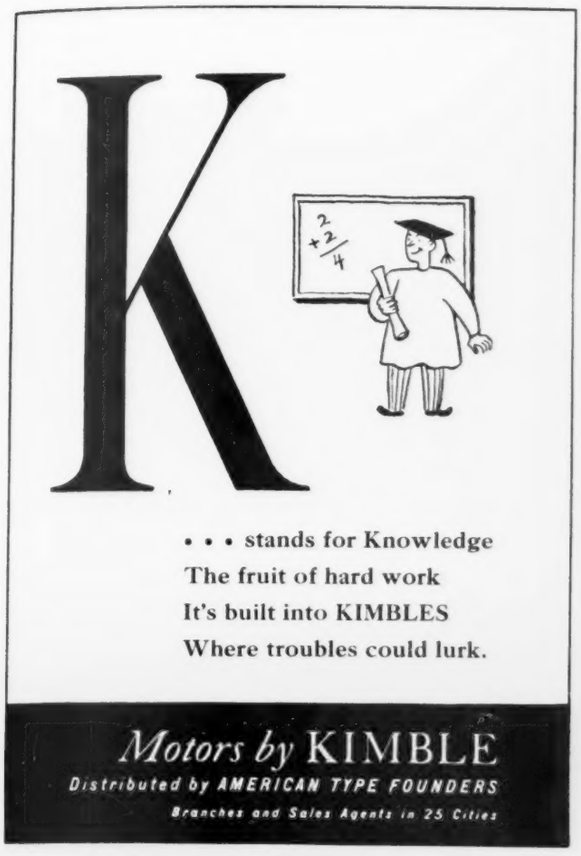
EQUIPMENT SALES

Purchases Goss Press

The Butler (Pa.) *Eagle* has purchased a new Goss press, to be installed as a floor-fed sextuple, consisting of three high speed anti-friction un ts with ink enclosures and a pair of high speed anti-friction folders. Two sets of nested angle bars are also included. One three-roll and one single-roll stands, automatic tension, carborundum floor plate, and full automatic drive with paper break detectors will be installed.

Recent Linotype Installations

One or more Linotypes, many of them with Self-Quadders and Thermo-Blo mold coolers, have been installed by Byron S. Adams, Washington, D. C.; Enid (Okla.) *Morning News* and the *Daily Eagle;* Mutehler and Whitham Composition Service, Washington, D. C.; Farrand Printing Company, Pella, Iowa; Manny E. Friedman, New York City; Ohio County Messenger, Beaver Dam, Ky.; Swanson Brothers Company, Chicago; Clarksdale Printing Company, Clarksdale, Miss.; Greater Buffalo Press, Inc., Buffalo, N. Y.; Douglasville County Sentinel, Douglasville, Ga.; Fayetteville (N. C.) *Observer;* Nickerson (Kan.) *Argosy;* Salina (Kan.) *Journal;* Miami Typesetting Company, Miami, Fla.; Brunswick *Times-Gazette,* Lawrenceville, Va.; Independent Typesetting Company, New YorkCity; Keys Printing Company, Greenville, S. C.; Rainier Press, Seattle, Wash.; Charlestown (Ind.) *Shopping News;* Review and Herald Publishing Company, Takoma Park, Washington, D. C.; Odessa (Texas) *Daily American;* Calhoun Press, Inc., Hartford, Conn.; *Post-Herald* and the *Raleigh Register,* Beckley, W. Va.; London (Ontario) *Echo*



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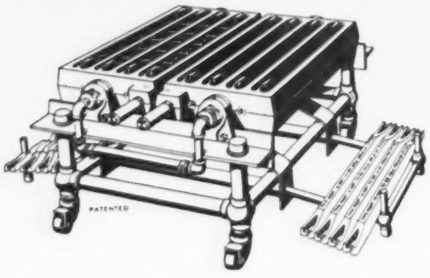

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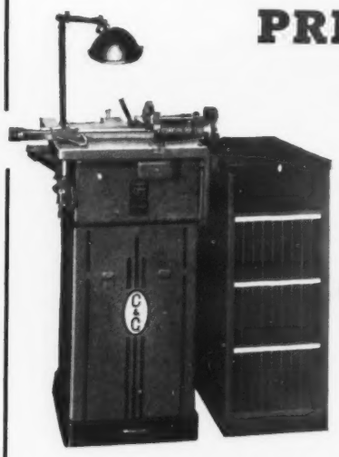

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STUD-BLOCK

(Continued from Page 18)

Mold Ejector Alignment

Remove one of the molds; remove its cap and place the mold body (without cap or liners) in a pocket that has not been filed or tampered with. See that pocket and mold are clean and free of all metal scales. Seat the mold firmly down in the pocket, and to the right as far as it will go, using two screws to fasten the body to the disk, preferably the two outside screws. Turn the mold body to normal position and back the machine to bring the mold disk studs forward onto the stud blocks and then pull a perfect 30-em ejector blade forward to the mold cell side of the mold body.

Now you are ready to adjust the relationship of the mold body with the ejector slide. The space between the mold body and the 30 pica ejector slide should not be less than 0.002 in. nor more than 0.005 in. at top and bottom of the ejector. After the mold disk has been pulled forward by hand, the locking studs in the disk will shift the position of the locking stud blocks rotationwise with the locking studs so that the block bushings will be centered over the studs.

To determine the space between the constant side of the mold body and the ejector blade, a steel feeler gauge should be used. These are commonly obtainable from hardware stores and garages or one may be borrowed from your local garage for the purpose. Leaves 0.0015 in., 0.002 in., 0.003 in., 0.004 in. and 0.005 in. may be used.

Shift the position of the stud blocks slightly until the space between mold and ejector is within the limits mentioned above. An ideal condition is 0.003 in. While the mold disk is in its satisfactorily adjusted position, tighten the stud blocks by means of the anchor screws.

In adjusting the position of the stud blocks to secure the proper relationship between the constant side of the mold body and the 30-em ejector blade, it is well to remember that you really rotate the mold disk slightly to make the mold parallel with the ejector. In doing this, the stud blocks by reason of being in engagement with the locking studs on the disk also are rotated through a theoretical small sector of a circle.

While securing the proper clearance of the ejector blade and the mold (both top and bottom) at no time should the disk or the stud blocks be shifted so forcibly as to destroy the original fixed adjustment of the mold slide itself described under the sub-title *Adjusting the Mold Slide.* Now, if the stud blocks have been adjusted correctly, the mold slide may be pulled forward *on* and pushed back *from* the stud blocks *without friction*; there will be no binding between the mold disk gear and the teeth of the driving pinion and the mold disk will not drop when pushed off the stud blocks.

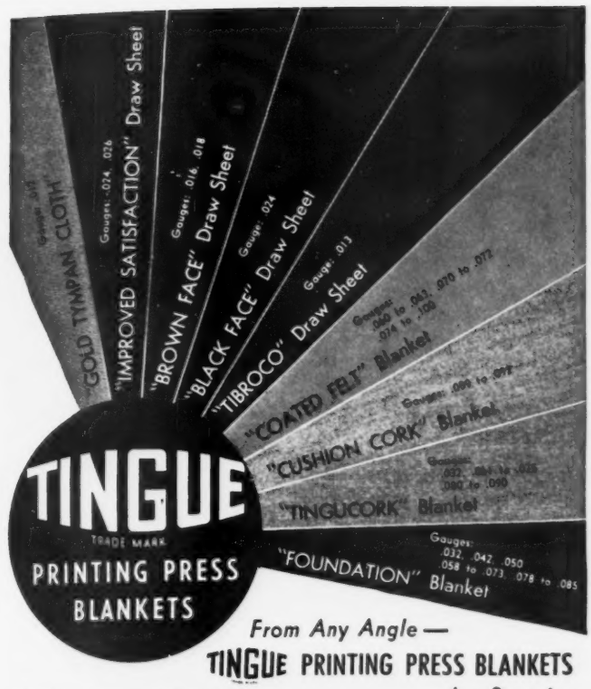
After tightening the screws, check again with a feeler gauge between the constant side of the mold body and the ejector blade to be sure the stud blocks have been set correctly. Too much clearance between constant side of mold and ejector blade (in excess of 0.005 in.) may cause the ejector blade to strike the mold cap when using 5-point liners.

To repeat, the disk should pull forward by hand without resistance when the studs enter the bushings. Keep ever in mind the all important matter of a uniform clearance between mold body and ejector, top and bottom. Also, bear in mind when manipulating the position of the stud blocks to obtain proper clearance between constant side of mold body and ejector that you do not "distort," throw out or destroy the adjusted position of the slide you have made by means of the mold guide support screw. An indication of this will be a bind between the teeth of the mold disk and its driving pinion.

Cardinal Points

A cardinal point to be observed when relocating new stud blocks is to avoid moving the blocks so far to the left that

(*Continued on Page 50*)



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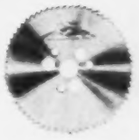

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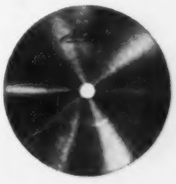

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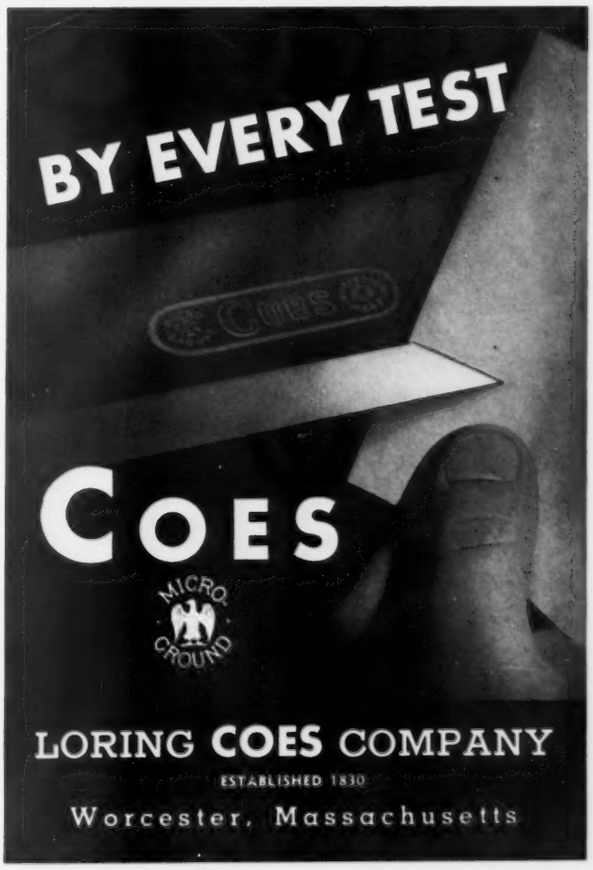

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the mold slide will be thrown out of its newly-adjusted position and cause a bind between the mold disk and the mold disk driving pinion. Another cardinal point is to avoid throwing the movable element in the left-hand stud block to the left. In its correctly adjusted position, the bushing in the left-hand block should be located as far to the right as it will go in order to provide movement for expansion and contraction of the mold disk studs under the varying idle and casting temperatures of the disk itself.

Drilling for Dowels

Now lower the vise to second position, and drill through the dowel holes with a No. 14 drill. Then remove the stud blocks, insert the dowels, replace the blocks and make a final test to see that the mold disk studs do not bind on the stud blocks and that the clearance between mold body and ejector has not changed. Try pulling the mold disk forward and pushing it back several times.

The dowels may be squeezed into the blocks in a bench vise, but do not force the dowels into the vise frame. That portion of the dowels which enters the holes in the vise frame may be polished off *slightly* in a lathe or a drill chuck before squeezing the dowels into the stud block to facilitate entrance of the dowels into the vise frame holes. When the screws have again been set up tightly, the job is complete with the exception of checking the parallelism of the mold and the first elevator head. This cannot be checked until the studs and blocks are set permanently.

Parallelism Adjustment

The proper setting of the first elevator slide or the possible altering of the key in the first elevator head to effect a true parallelism of the mold and the first elevator head is essential after the stud blocks have been set, but must not be confused with the setting of the stud blocks themselves.

To check the parallelism of the mold with the first elevator head, open the vise jaws to 30 picas, put a new en quad in the elevator jaws at each end of the 30-pica measure, run the machine ahead until the disk advances, and raise the first elevator to alignment position by inserting a screwdriver between the first elevator cam and the cam roller. While the elevator is thus held up try the mats with stout tweezers to see that both are held with equal tension. If not, first consider the adjustment of the elevator slide gibs. After removing the screwdriver you have placed between the cam and cam roller, back the machine until the mold disk has retreated from the locking stud blocks. Test the first elevator slide the full length of its stroke by grasping the finger ledge provided for that purpose. There should be about 0.005 in. clearance between the right side of the first elevator head and the channel rails at normal and transfer positions. The gibs should be adjusted so there will not be excess play in the slide.

The Intertype r.h. gib runs the full length of the slide and is accurately doweled.

After having adjusted the gibs for proper clearance, it is more than likely that the aligning bar-mold groove parallelism will not be true. In case the first elevator-mold alignment may be out of true only a slight amount, the parallelism may be obtained by re-adjusting the gibs slightly. In case slight adjustment of the gibs will not bring the mold and elevator head into parallelism, the flat key in the elevator front jaw must be altered by peening and filing to bring the elevator head into alignment with the mold. The first elevator adjusting bar, E-1208 or U-281, even if worn only slightly, should be renewed first.

Peening the Key

This first elevator jaw (front) key, E-1120 or U-287, a flat strip of steel 2½ in. by ½ in. may be altered in the following manner:

If the left matrix binds and the right matrix is loose, it will be necessary to tilt the right side of the first elevator head matrix aligning rail upwardly by peening the lower right surface of the key and dressing off the upper key surface a like amount; then peen the upper left edge of the key and dress off the lower left side of the key to lower the left side of the matrix aligning rail.

(*Continued on Page 52*)

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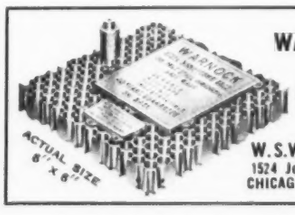

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SAW-TRIMMERS
ROUTERS-CURVED AND FLAT ★ JIG SAWS-MORTISERS
STEEL RULE DIES
J.A.RICHARDS
write THE SAWMAKER KALAMAZOO

While peening and dressing the key, bear in mind that only one-half of the upper and lower key edges projecting from the first elevator head are to be altered. In other words, the key is to fit tightly and remain in its slot-seat in the first elevator head while the projecting portion is being fitted to tilt the position of the jaw.

The peening should be done with a light hammer and a fine-tooth pillar file should be used for dressing the key. Also, bear in mind that when you are working on one side of the key, the peening and filing operations should not extend more than half the length of the key. This will reduce the work required to the minimum. This is not a difficult operation, but if carefully done the parallel condition of the first elevator aligning rail and mold grooves will soon be obtained.

It is apparent that if the first elevator adjusting bar is not parallel to the mold when the disk is on the studs, matrices will not align because the matrices at one end of the line will bind against the mold aligning groove when the elevator rises to make matrix alignment and leave the balance of the matrices in a loose condition, thus making alignment of matrices impossible.

Possible to Save Time

If the machinist wishes to experiment with the view to a possible saving of time, he may insert the dowels in the new blocks and set them in the old dowel holes in the vise frame provided they will go without forcing them in. Then the test may be made as outlined under the sub-head *Alignment of Mold and Ejector*, except that the stud blocks should not be loose this time. Make sure the disk moves freely on and off the studs and that the mold disk support screw or the mold gears do not bind.

Occasionally

In case the above directions do not bring satisfactory results, do not be reluctant to again remove the dowel pins and start as directed under the sub-head *Adjusting the Mold Slide.*

First Elevator Slide Downstroke Banking Screw Adjustment

Adjust the first elevator slide downstroke banking screw until there is up-and-down play between the screw and the vise cap in the amount of 0.010 in. On later machines using 18 and 24 point two-letter display matrices, this screw should be set to permit but 0.006 in. play. This adjustment should be made only with new matrices in the first elevator jaws (30-pica measure) and with the mold disk studs in engagement with the stud blocks.

Final Check

Besides the consideration of the clearance between mold and ejector, parallelism of mold and adjusting bar in the first elevator head, the mold disk support screw, and down stroke of the first elevator, which have already been stressed, check up on the following:

Vise automatic, vise jaws, pump stop, assembler slide, the brake on the mold turning shaft, the shoes on the mold turning cam, mold disk guide or guides, and see that the screw in the square block behind the bevel gear has not worked loose.

It is suggested that you first do a phantom job. Put yourself through all the operations mentally and do this with the machine before you. Know the reason for every operation. Assemble the necessary tools and do the work during uninterrupted time. The author wants to wish you good luck, but there's no such thing as luck in a surgical operation or an exacting mechanical operation. It is the one who works with intelligence and understanding who is successful.

The above outline was not made while sitting in an armchair, but rather from notes made on several jobs of setting stud blocks. After the first writing, prominent machinists were consulted and additions and changes were made.

While the following named respected machinists do not agree with the writer in all he has said, grateful acknowledgment is here given to Harry Pottle of Western Newspaper Union, Chicago; Walter Severin of Intertype Corporation; George Cornell (now passed away), W. J. Mulroy of Mergenthaler Linotype Company; and Mac Sinclair, editor of *Printing Equipment Engineer.*

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Pressroom

1 PAPER — Champion offers specimens of "a Champion paper for every use." Send for samples of Champion papers for advertising.

2 PRESS BLANKETS — Vulcan says, "Vulcan Press Blankets performance add up to less trouble in the pressroom and less expense to the firm." Get details.

3 OFFSET — Get particulars on Harris equipment to "complete your pressroom." Just circle this number on the post card.

4 INK—Ask for literature on Sinclair & Valentine "Zephyr Blacks."

5 MAGAZINE PRESS — C. B. Cottrell & Sons offer details and specifications of its presses and Claybourn Plate Making equipment. Circle this number on the post card.

6 PRESS BLANKETS —Tingue, Brown & Company will send you specifications on Tingue blankets for every type of service.

7 INK — Get the Eagle specimen book showing a wide range of Eagle colors.

8—**ATF** will send you information on Offset "to increase the flexibility of your shop."

9 AIR CLEANER — ATF says — "Eliminate excess spray and get fluorescent light on the delivery of your press with the Filt-Air-Lite."

10 INK — F & L offers you complete information on "laboratory proven" printing inks.

11 PAPER — Bryant Paper Company will send you information on the Bryant Paper for that next job.

12 INK — Use the post card to get the Flint Color Selector offered by Howard Flint Ink Company.

13 ROLLERS — Ideal Roller Co. offers to send you information on the Ideal Roller for your Presses.

14 INK — Geo. H. Morrill Co. asks, "May we show you our colors?" Just send the post card.

15 ROLLERS — Get more information on Mercury Rollers or Press Blankets.

Platemaking

16 ROUTING CUTTERS — Get John Royle catalog 425 on the complete Royle line of routing cutters.

17 ZINC—Atlantic Zinc Works will send the booklet, "Getting Down To Zinc Facts" and more information on Zomo Zinc and A-Z Alloy.

18 CATALOG —American Publishers Supply offers its complete catalog of stereotype equipment and supplies.

19 DRY MAT—Burgess will send samples of Burgess Chrome Mats for newspapers.

20 EASYKASTER — "There is no 'stop and go' with a Hammond EasyKaster." Hammond will gladly send you full description and prices.

21 STEREOTYPE SUPPLIES—Get the Eastern Newspaper Supply catalog of equipment and supplies for the stereotype room.

22 DRY MAT— Certified offers an informative booklet on plate duplication with dry mats.

23 MASTERFORMER — Sta-Hi Corp. offers a descriptive booklet on the uses of Master Formers on producing, "better printing at lower costs."

PLEASE FILL OUT THIS CARD CAREFULLY

PRINTING EQUIPMENT Engineer — February
1276 West Third Street, Cleveland, Ohio.

Without obligation please have the manufacturers send me literature or information circled below. (These numbers correspond to numbers on descriptive paragraphs).

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36
37 38 39 40 41 42 43 44 45 46

NAME.....TITLE.....DEPT.....

FIRM NAME.....

STREET.....CITY.....STATE.....

Use this Free Service —

KEEP UP-TO-DATE ON EQUIPMENT AND SUPPLIES

24 **DRY-MAT**— Circle this number for a sample lot of Wood Mats.

25 **ZINC** — Send the post card to get data on Edes products for photo-engraving.

Composing Room

26 **TELETYPESETTER**—will "show you how to increase the size and quality of your paper without increasing production costs."

27 **BLUE STREAK**—Linotype will give you added particulars on "the way to Blue Streak efficiency."

28 **SLOW SPEED ASSEMBLER** —a device which Linotype Parts Company says "will modernize older Linotypes and Intertypes."

29 **NUMBERING MACHINES**— Wetter offers you a unique booklet, "Numbering for Profit." Send for it.

30 **MONOTYPE**—will send you complete description on precision Monotype Equipment. Circle this number for it.

31 **METAL FEEDER**— Get information on the advantages and features of the Jordan Metal Feeder.

32 **SAW SHARPENING SERVICE** — Automatic Saw Sharpening Service will give particulars on how to get new saws free.

33 **CUT CEMENT** — Let Booth Rubber Company give you information on how useful Zink Cut Cement can be to you.

34 **TYPE METAL**—Imperial Type Metal Company will send you an informative booklet, "Everyday Problems of Type Metal Users and Their Solutions."

35 **INTERTYPE** — Offers booklets on how display composition is handled on the Intertype.

36 **PROOF PRESSES** — Vandercook will send you specifications of their presses for every kind of proofing.

37 **CHALLENGE EQUIPMENT** —Ask for information on Challenge Composing Room Equipment.

38 **BENCH SAW** — Circling this number will get you prices and specifications on the Hammond Glider TrimOsaw.

39 **LUDLOW** — Send the postal card for the details of the Ludlow story.

40 **BLACK & WHITE** — Matrix Contrast says, "One-third of all errors in straight composition can be saved." Send for booklet.

41 **SAW TRIMMER** — Get the 8 page catalog on features of the C & G No. 3A Saw Trimmer.

42 **VERTICAL MITERER** — send post card for complete information on this and other Rouse Tools for printers.

Miscellaneous

43 **KIMBLE ELECTRIC Company** offers a booklet on motors built for the printing industry.

44 **BEARINGS** — Send the post card for more information about Timken Tapered Roller Bearings.

45 **CUTTER KNIVES** — To get details of Coes Micro-Ground knives, send the post card.

46 **BEARINGS** — Get information from SKF on the bearing for your requirement.

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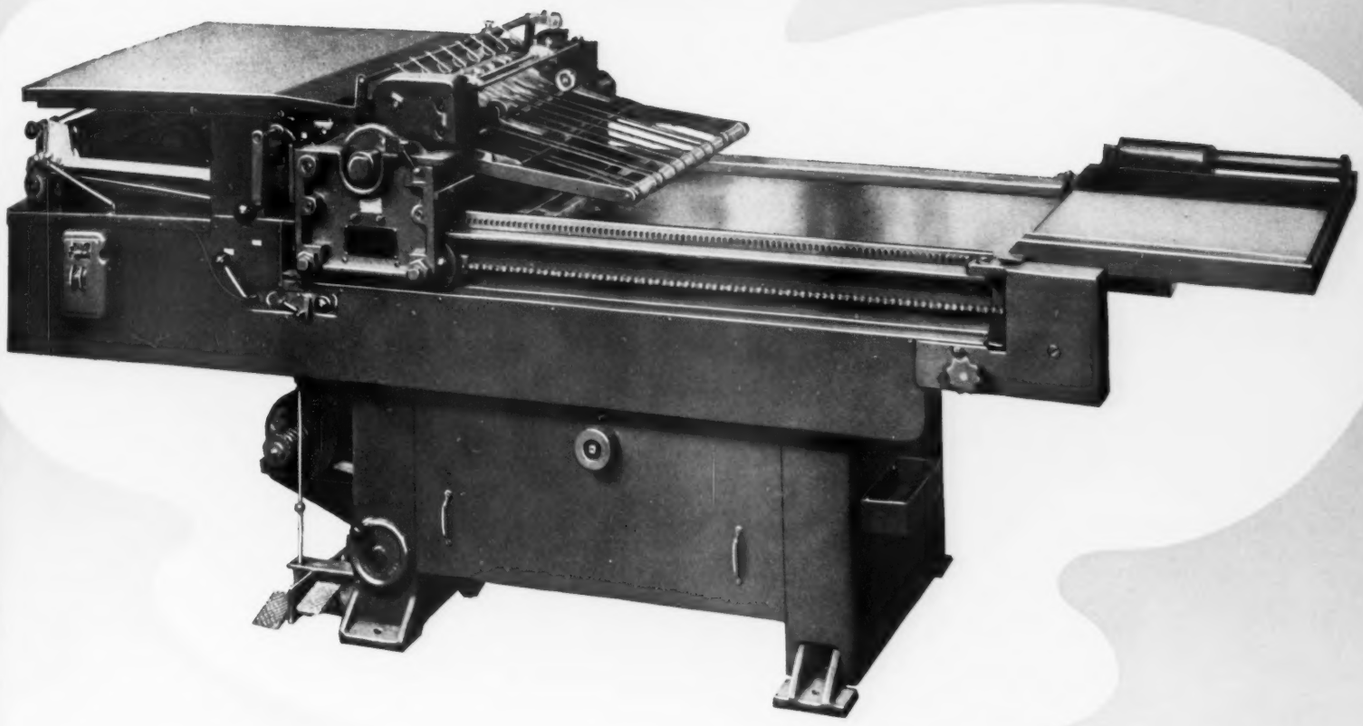
Cleveland, Ohio

HOW TO *Influence* ADVERTISERS



Many leading newspaper publishers have found that GOOD proofs, supplied in ample quantities have a favorable and lasting influence toward greater customer satisfaction.

A few years back, when a good proof of a newspaper advertisement was a rarity, quality was not so important. Now, the advertiser expects good proofs — suitable for departmental reading, posting, or distribution to the sales force. It may be that your competition supplies them.

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The No. 325A Vandercook Power Proof Press has automatic inking and automatic delivery. It is equipped to take forms from trucks without waste motion. It will take a sheet 24¾" x 27", printing a form 24" x 24½". It is essential equipment in the modern newspaper office.

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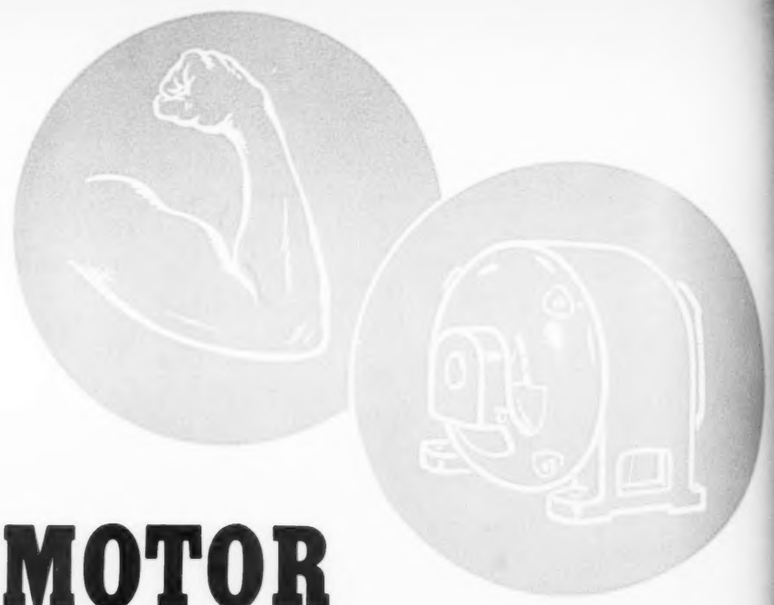
VANDERCOOK & SONS

Main Office and Factory
908 North Kilpatrick Avenue, Chicago, Illinois

Eastern Branch
214 East 45th Street, New York City

CANADA: SEARS LIMITED, TORONTO, MONTREAL, WINNIPEG, VANCOUVER



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...which will give you more net production?

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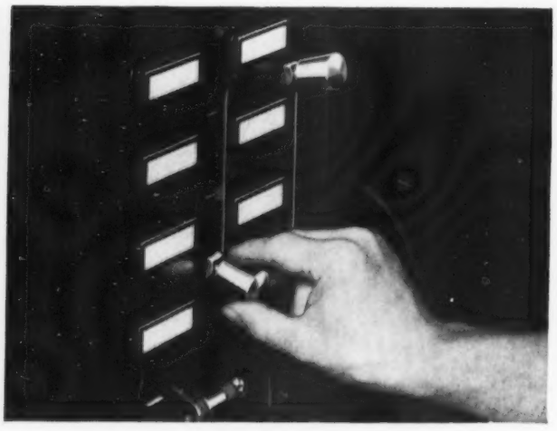

Intertype's New POWER-OPERATED Magazine Shift

*Among these exclusive features are **(1)** quick conversions from one model into another...in some cases even from mixers into non-mixers or vice versa...to meet changing requirements; **(2)** finger-flip changes of type and time-saving twin distribution, now obtainable on non-mixer as well as mixer machines; and **(3)** Intertype's power-operated channel entrance (now standard equipment on most Intertype models).

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